



# **STIC Search Report**

**EIC 1700**

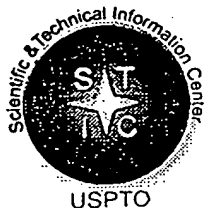
**STIC Database Tracking Number: 145396**

**TO: Rip A Lee**  
**Location: REM 10A24**  
**Art Unit : 1713**  
**March 1, 2005**

**Case Serial Number: 10/624678**

**From: Usha Shrestha**  
**Location: EIC 1700**  
**REMSSEN 4B28**  
**Phone: 571/272-3519**  
**usha.shrestha@uspto.gov**

## **Search Notes**



# STIC Search Results Feedback Form

**EIC17000**

Questions about the scope or the results of the search? Contact *the EIC searcher* or contact:

Kathleen Fuller, EIC 1700 Team Leader  
571/272-2505 REMSEN 4B28

## Voluntary Results Feedback Form

- I am an examiner in Workgroup:  Example: 1713  
➤ Relevant prior art **found**, search results used as follows:

- ☐ 102 rejection
- ☐ 103 rejection
- ☐ Cited as being of interest.
- ☐ Helped examiner better understand the invention.
- ☐ Helped examiner better understand the state of the art in their technology.

Types of relevant prior art found:

- ☐ Foreign Patent(s)
- ☐ Non-Patent Literature  
(journal articles, conference proceedings, new product announcements etc.)

➤ Relevant prior art **not found**:

- ☐ Results verified the lack of relevant prior art (helped determine patentability).
- ☐ Results were not useful in determining patentability or understanding the invention.

Comments:

Drop off or send completed forms to EIC1700 REMSEN 4B28

## SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: LEE, RJP A. Examiner #: 73630 Date: 02-14-2005  
 Art Unit: 1713 Phone Number: 571-272-1104 Serial Number: 10/624,678  
 Mail Box and Bldg/Room Location: 10A24 REM Results Format Preferred (circle): PAPER DISK E-MAIL

If more than one search is submitted, please prioritize searches in order of need.

\*\*\*\*\*  
 Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

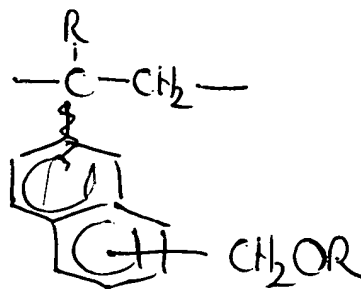
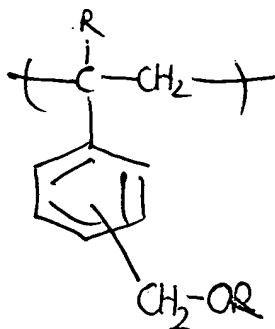
Title of Invention: ACENAPHTHYLENE DERIVATIVE, POLYMER, ANTI-REFLECTION FILM-FORMING COMPOSITION  
 Inventors (please provide full names): SUGITA, Hikaru KONNO, Keiji TANAKA, Masato  
 SCIENTIFIC REFERENCE BR  
 Sci & Tech Inf. Cntr

Earliest Priority Filing Date: JULY 31, 2002

FEB 17 2005

\*For Sequence Searches Only\* Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.  
 Pat. & T.M. Office

Please search for polymers derived from the vinylstyrene or vinylnaphthalene derivatives shown below.



here, R can equal H

$R \neq H$  R cannot equal H

Searcher: <u>1124</u>	NA Sequence (#) _____	STN <u>537-73</u>
Searcher Phone #: _____	AA Sequence (#) _____	Dialog _____
Searcher Location: _____	Structure (#) <u>1</u>	Questel/Orbit _____
Date Searcher Picked Up: <u>2/25/05</u>	Bibliographic _____	Dr. Link _____
Date Completed: <u>3/1/05</u>	Litigation _____	Lexis/Nexis _____
Searcher Prep & Review Time: <u>90</u>	Fulltext _____	Sequence Systems _____
Clerical Prep Time: <u>50</u>	Patent Family _____	WWW/Internet _____
Online Time: <u>120</u>	Other _____	Other (specify) _____

=> fil reg

FILE 'REGISTRY' ENTERED AT 10:39:28 ON 01 MAR 2005  
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.  
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.  
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=> d his

FILE 'LREGISTRY' ENTERED AT 09:04:32 ON 01 MAR 2005

L1 STR

FILE 'REGISTRY' ENTERED AT 09:10:15 ON 01 MAR 2005

L2 SCR 2043  
L3 SCR 1297  
L4 SCR 1839  
L5 4 S L1 AND L2 AND L3 AND L4  
L6 SCR 1838  
L7 3 S L1 AND L2 AND L3 AND L6  
L8 SCR 1918  
L9 6 S L1 AND L2 AND L3 AND L6 NOT L8  
L10 2438 S L9 FUL  
SAV L10 LEE678/A  
E NAPHTHALENE/CN  
L11 1 S E3  
L12 65 S L10 AND 591.49.57/RID  
L13 2373 S L10 NOT L12  
SAV L12 LEE678A/A  
SAV L13 LEE678B/A

FILE 'HCAPLUS' ENTERED AT 09:53:06 ON 01 MAR 2005

L14 31 S L12  
L15 1223 S L13  
SET ROLE TEXT  
L16 1 S US20040034155/PN  
L17 23 S L14(L)PREP/RL  
L18 6 S L17(L)COMPOSITION?  
L19 78 S L15(L)PREP/RL(L)COMPOSITION?  
L20 46 S L19 AND PHOTOGRA?/SC  
L21 51 S L18 OR L20  
L22 5 S L19(L)?REFLECT?  
L23 5 S L19 AND ?REFLECT?  
L24 5 S L22 OR L23  
L25 54 S L24 OR L21

FILE 'REGISTRY' ENTERED AT 10:39:28 ON 01 MAR 2005

=> d que l14

L1 STR

CH2~C~Cb~CH2~O  
 1 2 3 4 5

## NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM

GGCAT IS UNS AT 3

DEFAULT ECLEVEL IS LIMITED

## GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 5

## STEREO ATTRIBUTES: NONE

L2 SCR 2043

L3 SCR 1297

L6 SCR 1838

L8 SCR 1918

L10 2438 SEA FILE=REGISTRY SSS FUL L1 AND L2 AND L3 AND L6 NOT  
L8

L12 65 SEA FILE=REGISTRY ABB=ON PLU=ON L10 AND 591.49.57/RID

L14 31 SEA FILE=HCAPLUS ABB=ON PLU=ON L12

=&gt; d que 115

L1 STR

CH2~C~Cb~CH2~O  
 1 2 3 4 5

## NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM

GGCAT IS UNS AT 3

DEFAULT ECLEVEL IS LIMITED

## GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 5

## STEREO ATTRIBUTES: NONE

L2 SCR 2043

L3 SCR 1297

L6 SCR 1838

L8 SCR 1918

L10 2438 SEA FILE=REGISTRY SSS FUL L1 AND L2 AND L3 AND L6 NOT  
L8

L12 65 SEA FILE=REGISTRY ABB=ON PLU=ON L10 AND 591.49.57/RID

L13 2373 SEA FILE=REGISTRY ABB=ON PLU=ON L10 NOT L12  
L15 1223 SEA FILE=HCAPLUS ABB=ON PLU=ON L13

=> fil hcalpus

'HCALPUS' IS NOT A VALID FILE NAME

SESSION CONTINUES IN FILE 'REGISTRY'

Enter "HELP FILE NAMES" at an arrow prompt (=>) for a list of files that are available. If you have requested multiple files, you can specify a corrected file name or you can enter "IGNORE" to continue accessing the remaining file names entered.

=> fil hcaplus

FILE 'HCAPLUS' ENTERED AT 10:40:12 ON 01 MAR 2005

USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.

PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

COPYRIGHT (C) 2005 AMERICAN CHEMICAL SOCIETY (ACS)

=> d 125 1-54 ibib abs hitstr hitind

L25 ANSWER 1 OF 54 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:1018947 HCAPLUS

DOCUMENT NUMBER: 142:13816

TITLE: Photosensitive resin composition for formation of spacer of vertical orientation-type liquid crystal display element

INVENTOR(S): Sano, Kimiyasu; Minowa, Takaki; Saito, Chie; Nishikawa, Michinori

PATENT ASSIGNEE(S): JSR Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 28 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

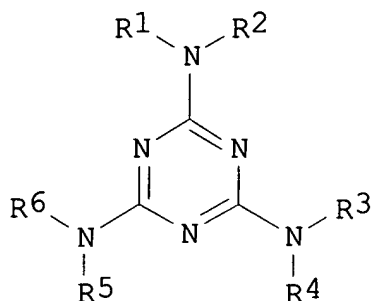
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 2004333963	A2	20041125	JP 2003-131114	

2003  
0509

PRIORITY APPLN. INFO.: JP 2003-131114

2003  
0509

GI



I

AB Disclosed is the photosensitive resin composition comprising (a) an alkali-soluble resin and (b) a 1,2-quinonediazide compound. Further, the composition comprises (c) a compound I (R1-6 = H, CH<sub>2</sub>OR; and R =

H,

C1-6 alkyl) and/or (d) an alkali-insol. or alkali-hardly soluble compound having  $\geq 2$  epoxy groups. The photosensitive resin composition provided excellent resolution

IT

**799254-94-7P 799254-95-8P**, Glycidyl methacrylate-2-hydroxyethyl methacrylate-methacrylic acid- $\alpha$ -methylstyrene dimer-dicyclopentanyl methacrylate-4-vinylbenzyl glycidyl ether copolymer  
**799254-96-9P**, Glycidyl methacrylate-lauryl methacrylate-methacrylic acid- $\alpha$ -methylstyrene dimer-dicyclopentanyl methacrylate-4-vinylbenzyl glycidyl ether copolymer

RL: NUU (Other use, unclassified); PRP (Properties); SPN (Synthetic preparation); **PREP (Preparation)**; USES (Uses)  
 (photosensitive resin **composition** for formation of spacer of vertical orientation-type liquid crystal display element)

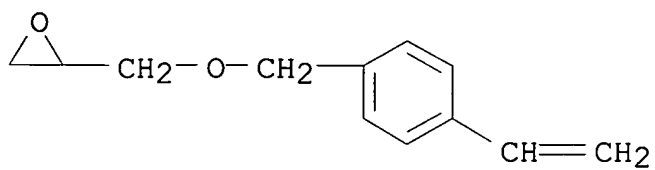
RN 799254-94-7 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, polymer with ethenylbenzene, [[(4-ethenylphenyl)methoxy]methyl]oxirane, (1-methylethenyl)benzene dimer, octahydro-4,7-methano-1H-inden-5-yl 2-methyl-2-propenoate and oxiranylmethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

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CRN 113538-80-0

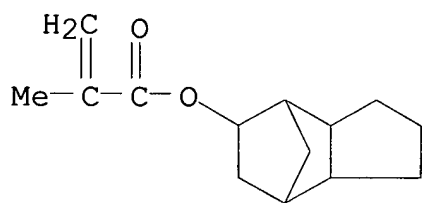
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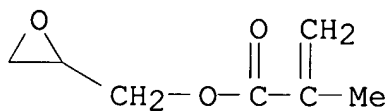
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CM 3

CRN 106-91-2

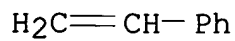
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CM 4

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CMF C8 H8

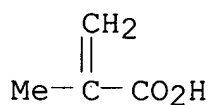




CM 5

CRN 79-41-4

CMF C4 H6 O2



CM 6

CRN 6144-04-3

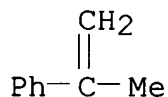
CMF (C9 H10)2

CCI PMS

CM 7

CRN 98-83-9

CMF C9 H10



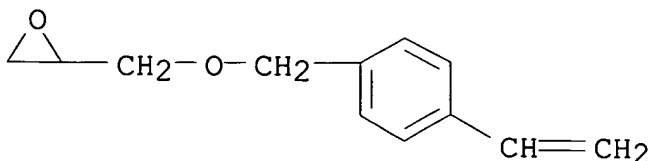
RN 799254-95-8 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, polymer with [[(4-ethenylphenyl)methoxy)methyl]oxirane, 2-hydroxyethyl 2-methyl-2-propenoate, (1-methylethenyl)benzene dimer, octahydro-4,7-methano-1H-inden-5-yl 2-methyl-2-propenoate and oxiranylmethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 113538-80-0

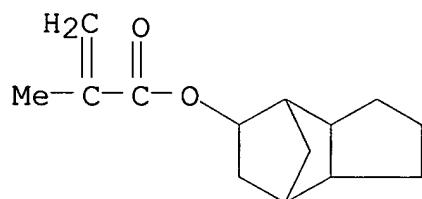
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CM 2

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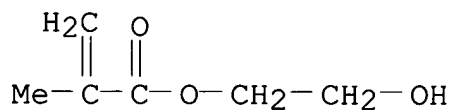
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CM 3

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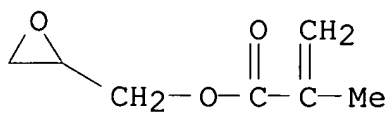
CMF C6 H10 O3



CM 4

CRN 106-91-2

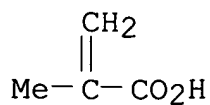
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CM 5

CRN 79-41-4

CMF C4 H6 O2



CM 6

CRN 6144-04-3

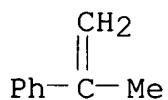
CMF (C9 H10) 2

CCI PMS

CM 7

CRN 98-83-9

CMF C9 H10



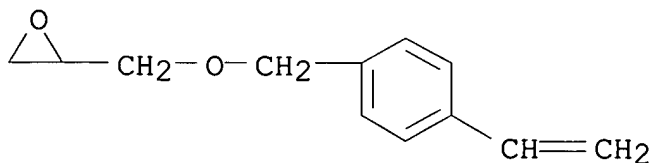
RN 799254-96-9 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, polymer with dodecyl  
 2-methyl-2-propenoate, [[(4-ethenylphenyl)methoxy]methyl]oxirane,  
 (1-methylethenyl)benzene dimer, octahydro-4,7-methano-1H-inden-5-  
 yl 2-methyl-2-propenoate and oxiranylmethyl 2-methyl-2-propenoate  
 (9CI) (CA INDEX NAME)

CM 1

CRN 113538-80-0

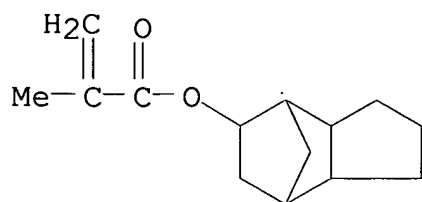
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CM 2

CRN 34759-34-7

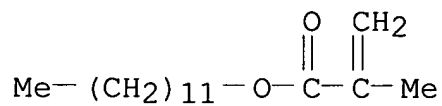
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CRN 142-90-5

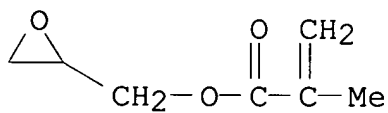
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CM 4

CRN 106-91-2

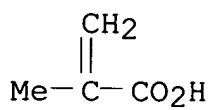
CMF C7 H10 O3



CM 5

CRN 79-41-4

CMF C4 H6 O2



CM 6

CRN 6144-04-3

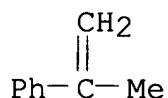
CMF (C9 H10)2

CCI PMS

CM 7

CRN 98-83-9

CMF C9 H10



IC ICM G03F007-033

ICS G02F001-1337; G02F001-1339; G03F007-004; G03F007-022;  
G03F007-032

CC 74-13 (Radiation Chemistry, Photochemistry, and

**Photographic** and Other Reprographic Processes)

Section cross-reference(s): 35, 38

IT 799254-93-6P **799254-94-7P 799254-95-8P,**Glycidyl methacrylate-2-hydroxyethyl methacrylate-methacrylic  
acid- $\alpha$ -methylstyrene dimer-dicyclopentanyl

methacrylate-4-vinylbenzyl glycidyl ether copolymer

**799254-96-9P,** Glycidyl methacrylate-laurylmethacrylate-methacrylic acid- $\alpha$ -methylstyrenedimer-dicyclopentanyl methacrylate-4-vinylbenzyl glycidyl ether  
copolymer

RL: NUU (Other use, unclassified); PRP (Properties); SPN

(Synthetic preparation); **PREP (Preparation)**; USES (Uses)(photosensitive resin **composition** for formation of spacer  
of vertical orientation-type liquid crystal display element)

L25 ANSWER 2 OF 54 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:957541 HCAPLUS

DOCUMENT NUMBER: 141:417949

TITLE: Photo- or heat-polymerizable resin composition  
for manufacturing direct-imaging lithographic  
printing plate precursors

INVENTOR(S): Kunita, Kazuto

PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 76 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

## PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004317652	A2	20041111	JP 2003-109099	2003 0414

PRIORITY APPLN. INFO.:

JP 2003-109099

2003  
0414

AB The composition contains an alkali-solubilizable polymer, wherein the polymer has alkali-sensitive hydrolyzable groups in the side chains. The title composition provides printing plate precursors of high sensitivity and high resolution for printing plates of high printing durability.

IT **791625-78-0P**

RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)  
(photo- or heat-polymerizable material **composition** for manufacturing lithog. printing plates)

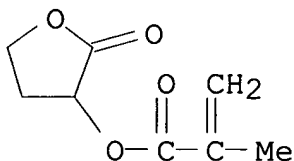
RN 791625-78-0 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, polymer with (4-ethenylphenyl)methyl  
2-methyl-2-propenoate and tetrahydro-2-oxo-3-furanyl  
2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 195000-66-9

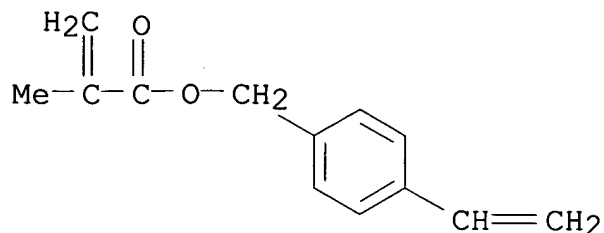
CMF C8 H10 O4



CM 2

CRN 99413-45-3

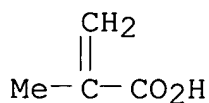
CMF C13 H14 O2



CM 3

CRN 79-41-4

CMF C4 H6 O2



IC ICM G03F007-032

ICS G03F007-00

CC 74-6 (Radiation Chemistry, Photochemistry, and  
**Photographic** and Other Reprographic Processes)  
 Section cross-reference(s): 35

IT 344367-13-1P 791625-76-8P 791625-77-9P **791625-78-0P**  
 791625-79-1P 791625-80-4P 791625-82-6P 791625-83-7P  
 791625-84-8P 791625-85-9P 791625-86-0P 791625-87-1P  
 791625-88-2P 791625-90-6P 791625-92-8P

RL: SPN (Synthetic preparation); TEM (Technical or engineered  
 material use); **PREP (Preparation)**; USES (Uses)  
 (photo- or heat-polymerizable material **composition** for  
 manufacturing lithog. printing plates)

L25 ANSWER 3 OF 54 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:900974 HCAPLUS

DOCUMENT NUMBER: 141:372820

TITLE: Thiadiazoles and triazines, their  
 photopolymerizable photoimaging compositions,  
 and lithographic plates utilizing the  
 compositions

INVENTOR(S): Doi, Kunihiro

PATENT ASSIGNEE(S): Mitsubishi Paper Mills, Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 32 pp.

CODEN: JKXXAF

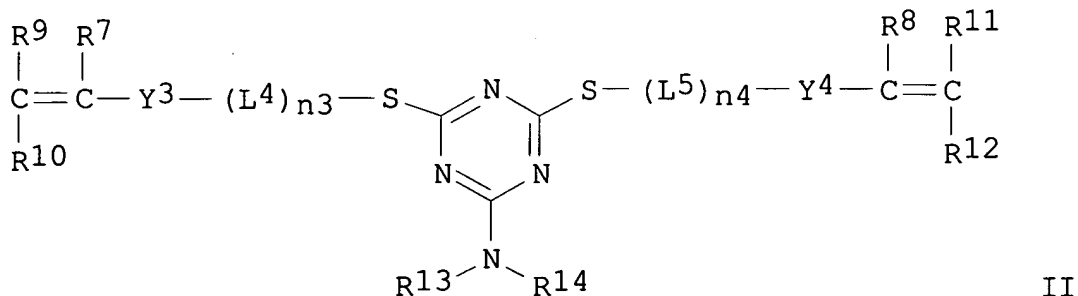
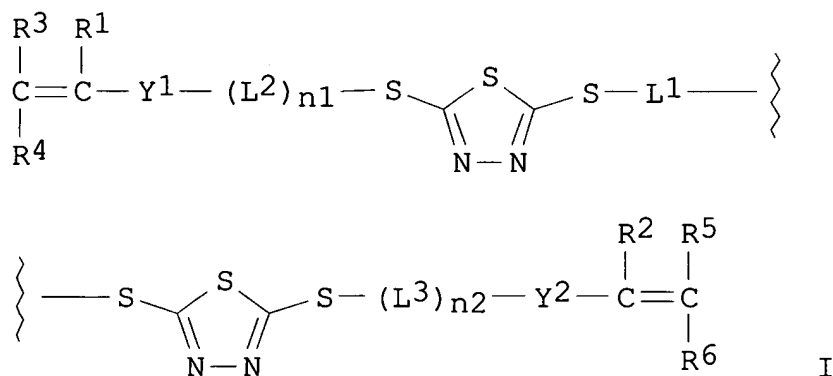
DOCUMENT TYPE: Patent

LANGUAGE: Japanese

PATENT INFORMATION:

2003  
0331

2003  
0331



AB The thiadiazoles are I [R1-R6 = H, halo, carboxyl, etc.; L1-L3 = H, C, N, O, S, polyvalent linkage; Y1, Y2 = (substituted) phenylene, CO; n1, n2 = 0, 1]. The triazines are II (R1-R6, L2,



L3, Y1, Y2, n1, n2 = same as I; R7, R8 = H, alkyl, alkenyl, aryl, heterocyclyl, R3R4 may form ring). Photopolymerizable photoimaging compns. containing I or II show good storage stability and high sensitivity in scanning exposure, or to 750-1000 nm near-IR laser or 400-430 nm blue-emitting semiconductor laser.

IT **778638-48-5P**

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)  
(manufacture of thiadiazoles and triazines for photopolymerizable photoimaging **compns.** showing high sensitivity to near-IR laser or blue-emitting semiconductor laser for lithog. plates)

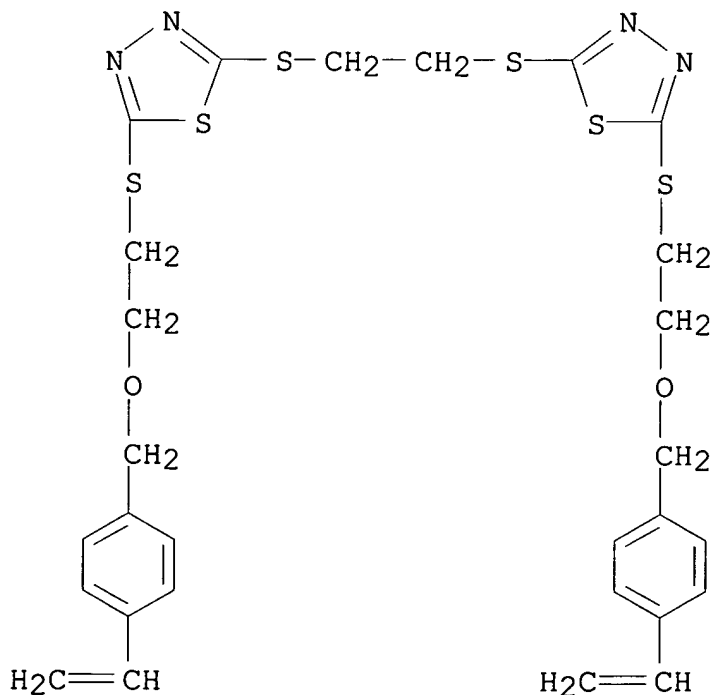
RN 778638-48-5 HCAPLUS

CN 1,3,4-Thiadiazole, 2,2'-[1,2-ethanediylbis(thio)]bis[5-[[2-[(4-ethenylphenyl)methoxy]ethyl]thio]-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 778638-47-4

CMF C28 H30 N4 O2 S6



IC ICM C07D285-125  
ICS C07D251-46; C08F012-34; C08F020-38; C08F020-60; G03F007-00;  
G03F007-027

CC 74-6 (Radiation Chemistry, Photochemistry, and  
**Photographic** and Other Reprographic Processes)

Section cross-reference(s): 28

IT 778638-38-3P 778638-40-7P 778638-41-8P 778638-43-0P  
778638-45-2P 778638-46-3P **778638-48-5P** 778638-50-9P  
778638-52-1P 778638-54-3P 778638-56-5P 778638-58-7P  
778638-60-1P 778638-62-3P 778638-64-5P 778638-65-6P  
778638-67-8P

RL: IMF (Industrial manufacture); TEM (Technical or engineered  
material use); **PREP (Preparation)**; USES (Uses)

(manufacture of thiadiazoles and triazines for photopolymerizable  
photoimaging **comps.** showing high sensitivity to  
near-IR laser or blue-emitting semiconductor laser for lithog.  
plates)

L25 ANSWER 4 OF 54 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:782091 HCAPLUS

DOCUMENT NUMBER: 141:304027

TITLE: Acenaphthylene polymer compositions for  
**antireflective** films

INVENTOR(S): Fujiwara, Koichi; Tanaka, Masato

PATENT ASSIGNEE(S): JSR Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 22 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

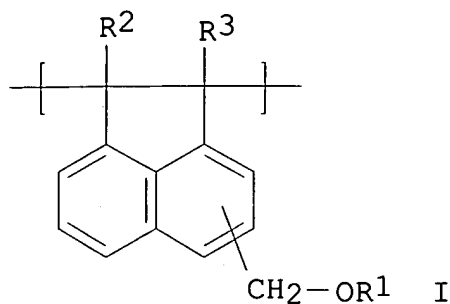
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	
JP 2004264710	A2	20040924	JP 2003-56547	

2003  
0304

PRIORITY APPLN. INFO.: JP 2003-56547

2003  
0304

GI



AB The compns., useful for fabrication of integrated circuits, comprise (A) polymers having repeating units of I (R<sub>1</sub> = H, monovalent organic group; R<sub>2</sub>, R<sub>3</sub> = monovalent atom, organic group) and (B) fullerenes and/or their derivs. The **antireflective** films was useful for forming high-resolution resist patterns without intermixing.

IT **760998-42-3P**

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)  
(fullerené derivative-crosslinked; acenaphthylene polymer  
**compns. for antireflective films**)

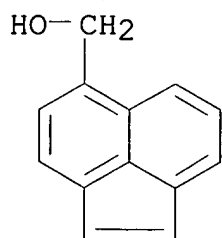
RN 760998-42-3 HCAPLUS

CN 5-Acenaphthylenemethanol, polymer with 4-ethenylbenzenemethanol  
(9CI) (CA INDEX NAME)

CM 1

CRN 650624-83-2

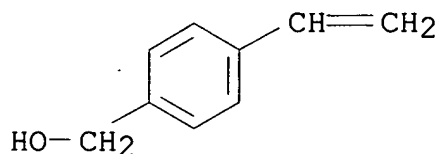
CMF C13 H10 O



CM 2

CRN 1074-61-9

CMF C9 H10 O



- IC ICM G02B001-11  
ICS G03F007-11; H01L021-027
- CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)  
Section cross-reference(s): 25, 38, 76
- ST acenaphthylene polymer **antireflective** film integrated circuit; hydroxymethylacenaphthylene acenaphthylene polymer fullerene bromomalonate crosslinking **antireflective**
- IT **Antireflective** films  
Integrated circuits  
(acenaphthylene polymer compns. for **antireflective** films)
- IT Fullerenes  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(crosslinking agents; acenaphthylene polymer compns. for **antireflective** films)
- IT Crosslinking agents  
(fullerene (derivative); acenaphthylene polymer compns. for **antireflective** films)
- IT 600-31-7DP, Bromomalononic acid, esters, reaction products with C60 fullerene 99685-96-8DP, C60 Fullerene, derivs.  
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)  
(crosslinking agent; acenaphthylene polymer compns. for **antireflective** films)
- IT 650624-84-3P **760998-42-3P**  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)  
(fullerene derivative-crosslinked; acenaphthylene polymer compns. for **antireflective** films)

L25 ANSWER 5 OF 54 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:779249 HCAPLUS

DOCUMENT NUMBER: 141:285811

TITLE: Light-sensitive polymerizable resin composition for fabricating interlayer electrically insulative films and micro lens and method for manufacturing product using the same

INVENTOR(S): Takamoto, Eiji; Sano, Kimiyasu; Nishikawa, Michinori  
 PATENT ASSIGNEE(S): JSR Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 26 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004264623	A2	20040924	JP 2003-55176	2003 0303

PRIORITY APPLN. INFO.:

JP 2003-55176

2003  
0303

AB The title composition contains a polymer and a photoacid generator, wherein the polymer has epoxy groups and acetal or ketal groups and  $\geq 2,000$  weight average mol. weight calculated as polystyrene mol. weight

by GPC anal. and wherein the photo-acid generator generates an acid of  $\leq 4.0$  pKa. The composition shows high sensitivity and good storageability and provides wide development margin and films of good contact with substrate.

IT **760192-31-2P**, 4-Vinylbenzyl glycidyl ether-1-Cyclohexyloxyethyl methacrylate-styrene-2-hydroxyethyl methacrylate-glycidyl methacrylate- $\alpha$ -Methylstyrene copolymer  
 RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)  
 (light-sensitive polymerizable resin **composition**)

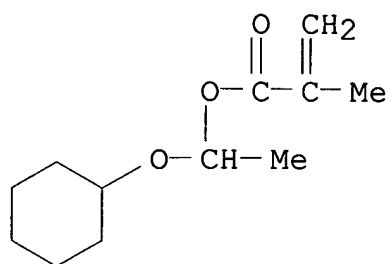
RN 760192-31-2 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 1-(cyclohexyloxy)ethyl ester, polymer with ethenylbenzene, [[[4-ethenylphenyl)methoxy]methyl]oxirane, 2-hydroxyethyl 2-methyl-2-propenoate, (1-methylethenyl)benzene and oxiranylmethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 143556-62-1

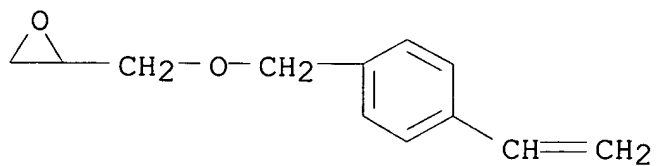
CMF C12 H20 O3



CM 2

CRN 113538-80-0

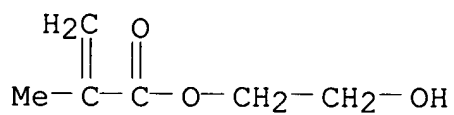
CMF C12 H14 O2



CM 3

CRN 868-77-9

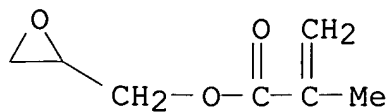
CMF C6 H10 O3



CM 4

CRN 106-91-2

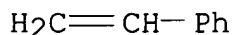
CMF C7 H10 O3



CM 5

CRN 100-42-5

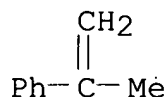
CMF C8 H8



CM 6

CRN 98-83-9

CMF C9 H10



IC ICM G03F007-038

ICS G02B001-04; G03F007-004

CC 74-5 (Radiation Chemistry, Photochemistry, and  
**Photographic** and Other Reprographic Processes)  
 Section cross-reference(s): 35, 37, 76

IT 760192-27-6P, 1-Cyclohexyloxyethyl methacrylate-styrene-glycidyl  
 methacrylate-2-hydroxyethyl methacrylate- $\alpha$ -Methylstyrene  
 copolymer 760192-28-7P, 1-Ethoxyethyl methacrylate-styrene-  
 glycidyl methacrylate-2-hydroxyethyl methacrylate- $\alpha$ -  
 Methylstyrene copolymer 760192-29-8P, Tetrahydropyranyl  
 methacrylate-styrene-glycidyl methacrylate-2-hydroxyethyl  
 methacrylate- $\alpha$ -Methylstyrene copolymer 760192-30-1P,  
 Tricyclo[5.2.1.0<sup>2,6</sup>]decanyl methacrylate-1-Cyclohexyloxyethyl  
 methacrylate-styrene-glycidyl methacrylate- $\alpha$ -Methylstyrene  
 copolymer **760192-31-2P**, 4-Vinylbenzyl glycidyl  
 ether-1-Cyclohexyloxyethyl methacrylate-styrene-2-hydroxyethyl  
 methacrylate-glycidyl methacrylate- $\alpha$ -Methylstyrene copolymer  
 RL: SPN (Synthetic preparation); TEM (Technical or engineered  
 material use); **PREP (Preparation)**; USES (Uses)  
 (light-sensitive polymerizable resin **composition**)

L25 ANSWER 6 OF 54 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:549812 HCAPLUS

DOCUMENT NUMBER: 141:89950

TITLE: Curable polymer compositions with good heat

INVENTOR(S): and moisture resistance  
 Horie, Michiyasu; Orihara, Tamotsu  
 PATENT ASSIGNEE(S): Sumitomo Bakelite Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 11 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO. -----	KIND ----	DATE -----	APPLICATION NO. -----	DATE
JP 2004189901	A2	20040708	JP 2002-359969	

2002  
1211

PRIORITY APPLN. INFO.: JP 2002-359969

2002  
1211

AB Title compns., useful for laminates, molding materials, and semiconductor sealants, comprise (A) vinylbenzyl derivs. having  $\geq 2$  vinylbenzyl ether groups on each benzene ring selected from 6 kinds of Markush structures specified by the document and (B) 0.01-0.1 mol.% peroxides with decomposition-starting temperature

(T) 120-140°. Thus, a composition containing 2,2-bis[4-(4-vinylbenzyloxy)phenyl]propane, styrene, and 2,5-dimethyl-2,5-bis(benzoylperoxy)hexane (T 129°) was heated at 180° for 1 h in a plate glass cell to give a test piece showing water absorption 0.21% after 2-h boiling, glass transition temperature 204°, and modulus 2900 MPa at 30° and 423 MPa at 300°.

IT **606927-40-6P**

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)  
 (vinylbenzyl compound-based curable **composition** with good heat and moisture resistance)

RN 606927-40-6 HCAPLUS

CN Naphthalene, 1,5-bis[(4-ethenylphenyl)methoxy]-, polymer with ethenylbenzene (9CI) (CA INDEX NAME)

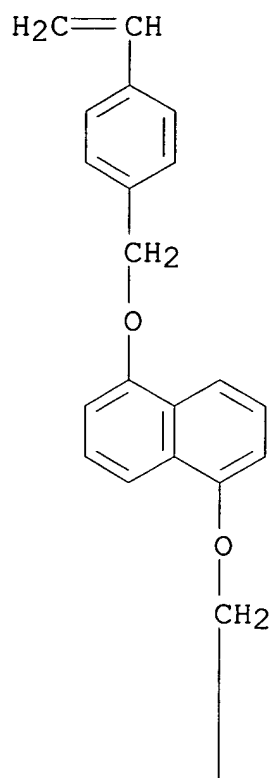
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CRN 129458-79-3

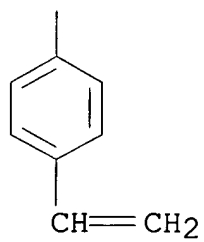
CMF C28 H24 O2



PAGE 1-A



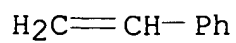
PAGE 2-A



CM 2

CRN 100-42-5

CMF C8 H8



IC ICM C08F012-34  
 ICS C08F004-32  
 CC 37-6 (Plastics Manufacture and Processing)  
 IT 122106-51-8P 606927-39-3P **606927-40-6P** 606927-43-9P  
 606927-45-1P 714950-04-6P  
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)  
 (vinylbenzyl compound-based curable **composition** with good heat and moisture resistance)

L25 ANSWER 7 OF 54 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:512467 HCAPLUS

DOCUMENT NUMBER: 141:72402

TITLE: Thermosetting resin compositions with low dielectric constant and high glass-transition temperature

INVENTOR(S): Orihara, Tamotsu; Horie, Michiyasu

PATENT ASSIGNEE(S): Sumitomo Bakelite Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 11 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	
JP 2004175950	A2	20040624	JP 2002-344670	2002 1127
				2002 1127

PRIORITY APPLN. INFO.: JP 2002-344670

AB The compns. contain (A) compds. selected from poly(3- or 4-vinylbenzyloxy)benzene, poly(3- or 4-vinylbenzyloxy)naphthalene, poly(3- or 4-vinylbenzyloxy)biphenyl, poly(3- or 4-vinylbenzyloxy)diphenylmethane, 9,9-bis[[poly(3- or 4-vinylbenzyloxy)]phenyl]fluorene, cyclohexylidenebis[[poly(3- or 4-vinylbenzyloxy)]benzene], or their derivs. with halo and/or C<sub>≤</sub>4 alkyl group and (B) compds. selected from (3- or 4-vinylbenzyloxy)benzene or its derivs. with halo, C<sub>≤</sub>4 alkyl, and/or C<sub>≤</sub>6 cycloalkyl group and  $\alpha$ - or  $\beta$ -(3- or 4-vinylbenzyloxy)naphthalene or its derivs. with halo, C<sub>≤</sub>4 alkyl, and/or C<sub>≤</sub>6 cycloalkyl group. Thus, 11.4 g bisphenol A was treated with 15.9 g vinylbenzyl chloride

(CMS-P) in MeOH/Me<sub>2</sub>CO in the presence of NaOH to give 12.2 g product (I), sep., 10.8 g p-cresol was treated with 15.9 g 4-vinylbenzyl chloride (CMS 14) in the same condition to give 13.7 g product (II). I and II were mixed 75:25, melted at 120°, degassed, and cured between glass sheets to give a product showing T<sub>g</sub> 213°, elastic modulus 102 MPa at 230°, dielec. constant 2.61, and dielec. loss tangent 0.0044.

IT 706783-29-1P 706783-32-6P 706783-33-7P  
706783-34-8P 706783-35-9P 706783-38-2P  
706784-82-9P

RL: IMF (Industrial manufacture); PRP (Properties); **PREP**

**(Preparation)**

(thermosetting resin **compns.** containing vinylbenzyl ether compds. with high glass-transition temperature and low dielec. constant)

RN 706783-29-1 HCAPLUS

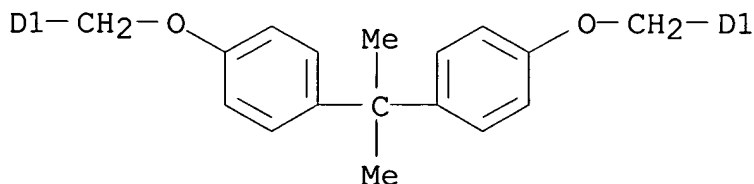
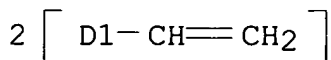
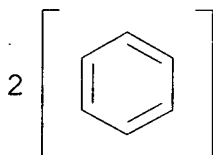
CN Naphthalene, 1-[(4-ethenylphenyl)methoxy]-, polymer with 1,1'-(1-methylethylidene)bis[4-[[3(or 4)-ethenylphenyl]methoxy]benzene] (9CI) (CA INDEX NAME)

CM 1

CRN 608138-43-8

CMF C33 H32 O2

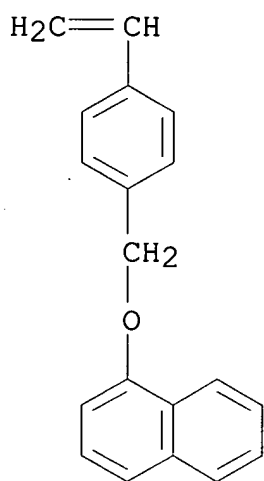
CCI IDS



CM 2

CRN 96411-64-2

CMF C19 H16 O



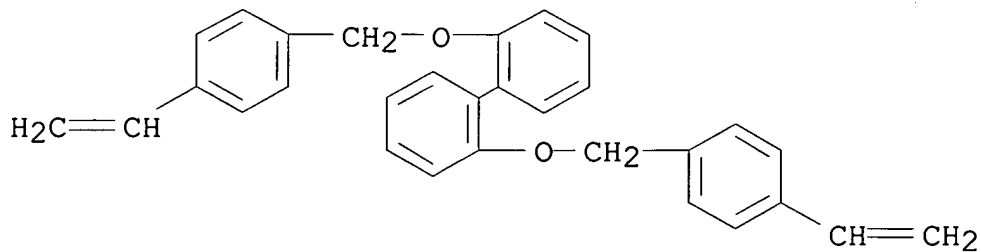
RN 706783-32-6 HCAPLUS

CN Naphthalene, 1-[(4-ethenylphenyl)methoxy]-, polymer with  
 2,2'-bis[(4-ethenylphenyl)methoxy]-1,1'-biphenyl (9CI) (CA INDEX  
 NAME)

CM 1

CRN 608101-34-4

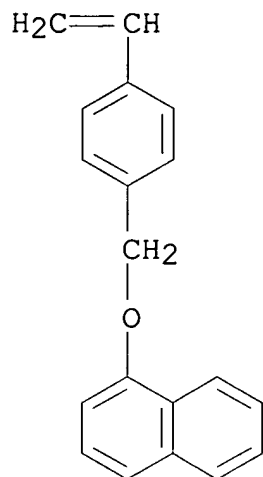
CMF C30 H26 O2



CM 2

CRN 96411-64-2

CMF C19 H16 O



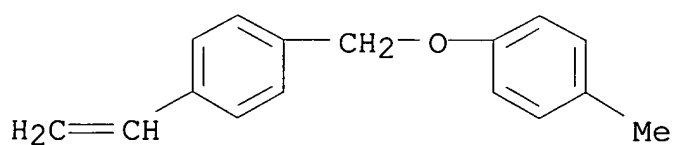
RN 706783-33-7 HCAPLUS

CN Naphthalene, 2,3-bis[[3(or 4)-ethenylphenyl]methoxy]-, polymer with 1-ethenyl-4-[(4-methylphenoxy)methyl]benzene (9CI) (CA INDEX NAME)

CM 1

CRN 706783-25-7

CMF C16 H16 O

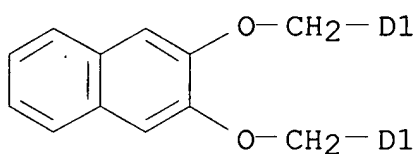
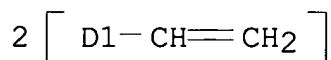
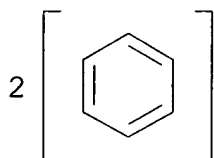


CM 2

CRN 608138-45-0

CMF C28 H24 O2

CCI IDS

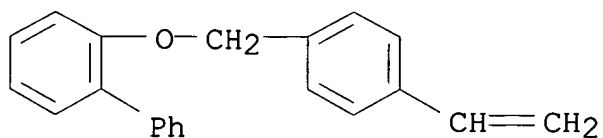


RN 706783-34-8 HCAPLUS  
 CN Naphthalene, 2,3-bis[[3(or 4)-ethenylphenyl]methoxy]-, polymer  
 with 2-[(4-ethenylphenyl)methoxy]-1,1'-biphenyl (9CI) (CA INDEX  
 NAME)

CM 1

CRN 706783-26-8

CMF C21 H18 O

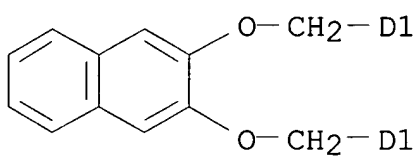
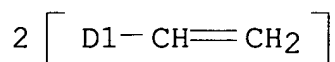
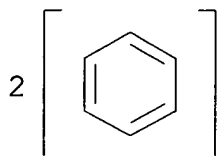


CM 2

CRN 608138-45-0

CMF C28 H24 O2

CCI IDS



RN 706783-35-9 HCAPLUS

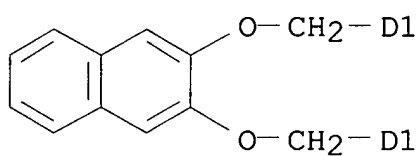
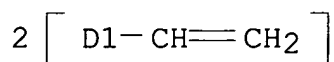
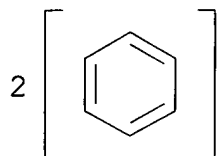
CN Naphthalene, 2,3-bis[[3(or 4)-ethenylphenyl]methoxy]-, polymer with 1-[(4-ethenylphenyl)methoxy]naphthalene (9CI) (CA INDEX NAME)

CM 1

CRN 608138-45-0

CMF C28 H24 O2

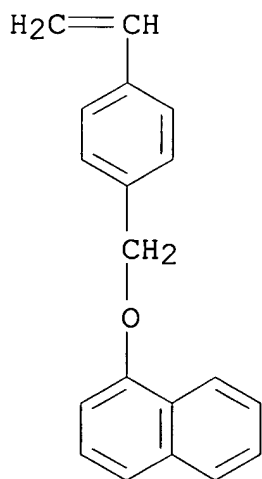
CCI IDS



CM 2

CRN 96411-64-2

CMF C19 H16 O



RN 706783-38-2 HCAPLUS

CN Naphthalene, 1-[(4-ethenylphenyl)methoxy]-, polymer with  
 1,1'-cyclohexylidenebis[4-[[3(or 4)-ethenylphenyl]methoxy]benzene]  
 (9CI) (CA INDEX NAME)

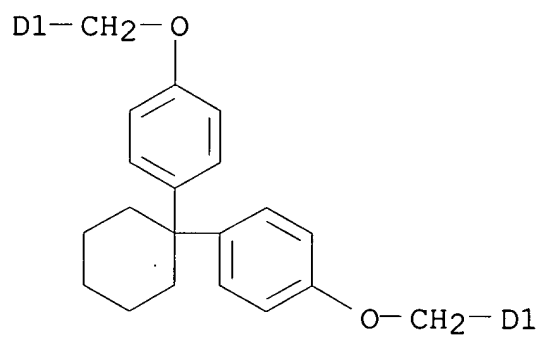
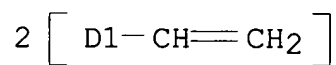
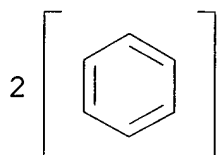


CM 1

CRN 608138-47-2

CMF C36 H36 O2

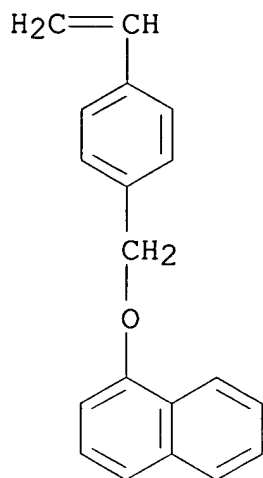
CCI IDS



CM 2

CRN 96411-64-2

CMF C19 H16 O



RN 706784-82-9 HCAPLUS  
 CN 9H-Fluorene, 9,9-bis[[[3(or 4)-ethenylphenyl]methoxy]phenyl]-,  
 polymer with 1-[(4-ethenylphenyl)methoxy]naphthalene (9CI) (CA  
 INDEX NAME)

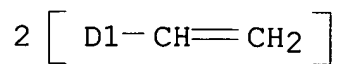
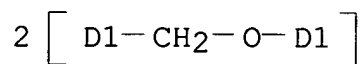
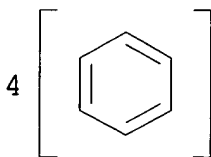
CM 1

CRN 706784-79-4

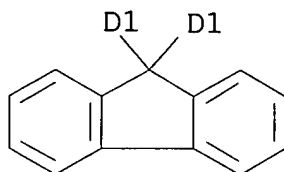
CMF C43 H34 O2

CCI IDS

PAGE 1-A



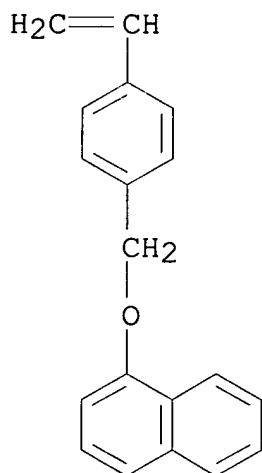
PAGE 2-A



CM 2

CRN 96411-64-2

CMF C19 H16 O



IC ICM C08F212-34

CC 37-6 (Plastics Manufacture and Processing)

Section cross-reference(s): 76

IT 706783-27-9P 706783-28-0P **706783-29-1P** 706783-30-4P706783-31-5P **706783-32-6P** **706783-33-7P****706783-34-8P** **706783-35-9P** 706783-36-0P706783-37-1P **706783-38-2P** 706784-80-7P 706784-81-8P**706784-82-9P**RL: IMF (Industrial manufacture); PRP (Properties); **PREP****(Preparation)**

(thermosetting resin **comps.** containing vinylbenzyl ether  
comps. with high glass-transition temperature and low dielec.  
constant)

L25 ANSWER 8 OF 54 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:310186 HCAPLUS

DOCUMENT NUMBER: 140:347654  
 TITLE: Polymerizable composition containing liquid crystal and polymer-dispersed liquid crystal  
 INVENTOR(S): Irisawa, Masatomi  
 PATENT ASSIGNEE(S): Asahi Denka Kogyo K. K., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 16 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 2004115739	A2	20040415	JP 2002-284400	2002 0927
				2002 0927

PRIORITY APPLN. INFO.:

JP 2002-284400

OTHER SOURCE(S): MARPAT 140:347654

AB The composition contains a nonpolymerizable liquid crystal and a polymerizable liquid crystal and/or its analog, which are substituted with styrene-like group p-CH<sub>2</sub>:CHC<sub>6</sub>H<sub>4</sub>XO (X = CH<sub>2</sub>, O). The composition may further contain a polymerization initiator. The polymer-dispersed liquid crystal is made of the composition, which

shows

improved solvent resistance, compatibility, and polymerizability compared with conventional acrylate type ones.

IT **680188-60-7P**

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)

(polymerizable **composition** containing liquid crystal substituted with styrene-like group for polymer-dispersed liquid crystal)

RN 680188-60-7 HCAPLUS

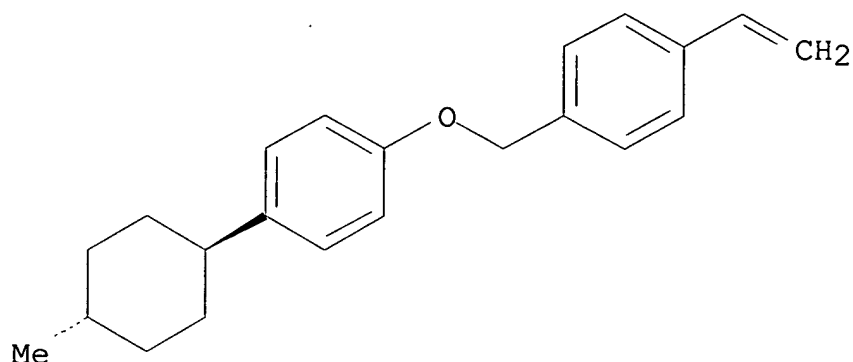
CN Benzene, 1-ethenyl-4-[[4-(trans-4-methylcyclohexyl)phenoxy]methyl]-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 680188-51-6

CMF C22 H26 O

Relative stereochemistry.



IC ICM C09K019-42  
 ICS C07C043-215; C07C069-54; C07C069-76; C07C069-773; C07C069-90;  
 C07C069-92; C07C255-54; C09K019-38; C09K019-46  
 CC 74-13 (Radiation Chemistry, Photochemistry, and  
**Photographic** and Other Reprographic Processes)  
 Section cross-reference(s): 38, 75  
 IT 59498-46-3P 146670-41-9P 158868-98-5P 158947-49-0P  
 680188-51-6P 680188-53-8P 680188-55-0P 680188-57-2P  
 680188-59-4P **680188-60-7P** 680188-61-8P 680188-62-9P  
 680188-63-0P 680188-64-1P 680188-65-2P 680188-66-3P  
 RL: IMF (Industrial manufacture); TEM (Technical or engineered  
 material use); **PREP (Preparation)**; USES (Uses)  
 (polymerizable **composition** containing liquid crystal substituted  
 with styrene-like group for polymer-dispersed liquid crystal)

L25 ANSWER 9 OF 54 HCAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 2004:247060 HCAPLUS  
 DOCUMENT NUMBER: 140:294803  
 TITLE: Polymerizable composition for planographic  
 printing plate precursor  
 INVENTOR(S): Shimada, Kazuto; Goto, Takahiro  
 PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan  
 SOURCE: Eur. Pat. Appl., 117 pp.  
 CODEN: EPXXDW  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	
EP 1400851	A2	20040324	EP 2003-19700	2003

0910

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE,  
MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ,  
EE, HU, SK

JP 2004099797 A2 20040402 JP 2002-265466

2002  
0911

JP 2004102031 A2 20040402 JP 2002-265467

2002  
0911

JP 2004118071 A2 20040415 JP 2002-283912

2002  
0927

US 2004062939 A1 20040401 US 2003-658429

2003  
0910

PRIORITY APPLN. INFO.:

JP 2002-265466 A

2002  
0911

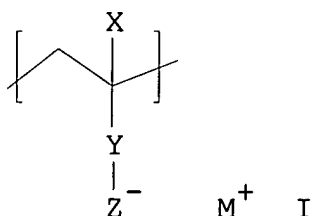
JP 2002-265467 A

2002  
0911

JP 2002-283912 A

2002  
0927

GI



AB The present invention provides a neg. type planog. printing plate precursor comprising polymerizable composition that includes a compound having polymerizable unsatd. group, and a macromol. compound having at a side chain a structure represented by the general formula I (Z<sup>-</sup> = COCOO<sup>-</sup>, COO<sup>-</sup>, SO<sub>3</sub><sup>-</sup>, SO<sub>2</sub>-N--R, R = monovalent organic group; M<sup>+</sup> = onium cation; X = H, OH, urethane, urea, halogen, amino, amide,

sulfonyl, sulfonate, monovalent organic group; Y = divalent organic connecting group; n = 0 or 1). The present invention provides a neg. type planog. printing plate precursor responsive to an IR laser, the precursor being superior in recording sensitivity and printing durability.

IT **675140-86-0P**

RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)

(polymerizable **composition** for planog. printing plate precursor)

RN 675140-86-0 HCAPLUS

CN Sulfonium, triphenyl-, salt with 4-[(4-ethenylphenyl)methoxy]-3,5-dimethyl- $\alpha$ -oxobenzeneacetic acid (1:1), polymer with ethenylbenzene (9CI) (CA INDEX NAME)

CM 1

CRN 100-42-5

CMF C8 H8

$\text{H}_2\text{C}=\text{CH}-\text{Ph}$

CM 2

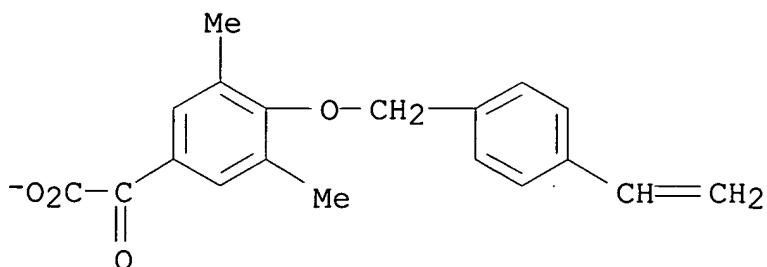
CRN 675140-85-9

CMF C19 H17 O4 . C18 H15 S

CM 3

CRN 675140-84-8

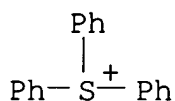
CMF C19 H17 O4



CM 4

CRN 18393-55-0

CMF C18 H15 S



IC ICM G03F007-029

ICS B41M005-40; B41C001-10

CC 74-6 (Radiation Chemistry, Photochemistry, and  
**Photographic** and Other Reprographic Processes)

IT 675140-73-5P 675140-75-7P 675140-77-9P 675140-80-4P

**675140-86-0P** 675140-88-2PRL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical  
or engineered material use); **PREP (Preparation)**; USES  
(Uses)(polymerizable **composition** for planog. printing plate  
precursor)

L25 ANSWER 10 OF 54 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:159085 HCAPLUS

DOCUMENT NUMBER: 140:207508

TITLE: Polymerizable composition and negative-working  
planographic printing plate precursor using  
the same

INVENTOR(S): Shibuya, Akinori; Kunita, Kazuto

PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan

SOURCE: Eur. Pat. Appl., 84 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1391784	A2	20040225	EP 2003-18695	2003 0822

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE,  
MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ,  
EE, HU, SK

JP 2004078085 A2 20040311 JP 2002-241719



2002  
0822

US 2004043325 A1 20040304 US 2003-645796

2003  
0822

PRIORITY APPLN. INFO.: JP 2002-241719 A

2002  
0822

OTHER SOURCE(S): MARPAT 140:207508

AB The invention provides a polymerizable composition comprising: a binder

polymer containing at least an acid group having an acid dissociation constant (pKa) of 5.5 or more and a radical addition polymerizable group, and a radical-generating compound capable of generating a radical with light or heat. Further, the invention provides a neg.-working planog. printing plate precursor which has a recording layer containing the polymerizable composition. Use of the polymerizable composition of the invention provides a planog. printing plate precursor that is capable of forming high-quality images free from stains in non-image portions, and further has high strength in formed image portions and excellent printing endurance.

IT **663610-60-4P**RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)(polymerizable **composition** for neg.-working planog. printing plate precursor containing)

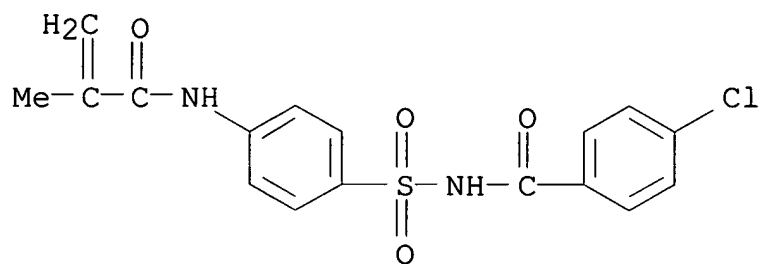
RN 663610-60-4 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, (4-ethenylphenyl)methyl ester, polymer with 4-chloro-N-[[4-[(2-methyl-1-oxo-2-propenyl)amino]phenyl]sulfonyl]benzamide, methyl 2-methyl-2-propenoate and phenylmethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 663610-59-1

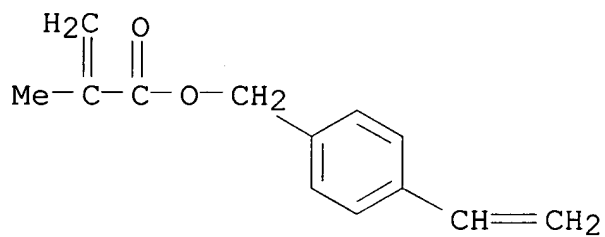
CMF C17 H15 Cl N2 O4 S



CM 2

CRN 99413-45-3

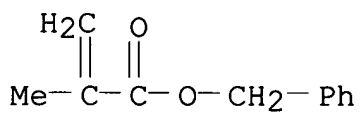
CMF C13 H14 O2



CM 3

CRN 2495-37-6

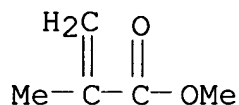
CMF C11 H12 O2



CM 4

CRN 80-62-6

CMF C5 H8 O2



IC ICM G03F007-038  
 ICS G03F007-033; B41C001-10; B41M005-40  
 CC 74-6 (Radiation Chemistry, Photochemistry, and  
**Photographic** and Other Reprographic Processes)  
 Section cross-reference(s): 35, 38  
 IT 663610-54-6DP, dehydrochlorinated 663610-55-7P 663610-56-8P  
 663610-58-0P **663610-60-4P** 663610-63-7P 663610-68-2P  
 RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical  
 or engineered material use); **PREP (Preparation)**; USES  
 (Uses)  
 (polymerizable **composition** for neg.-working planog.  
 printing plate precursor containing)

L25 ANSWER 11 OF 54 HCAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 2004:97225 HCAPLUS  
 DOCUMENT NUMBER: 140:136438  
 TITLE: Acenaphthylene derivative, polymer, and  
**antireflection** film-forming  
 composition  
 INVENTOR(S): Sugita, Hikaru; Konno, Keiji; Tanaka, Masato;  
 Shimokawa, Tsutomu  
 PATENT ASSIGNEE(S): JSR Corporation, Japan  
 SOURCE: Eur. Pat. Appl., 26 pp.  
 CODEN: EPXXDW  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1386904	A1	20040204	EP 2003-17282	2003 0730
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
US 2004034155	A1	20040219	US 2003-624678	2003 0723
JP 2004168748	A2	20040617	JP 2003-283561	

PRIORITY APPLN. INFO.:

JP 2002-224138

A

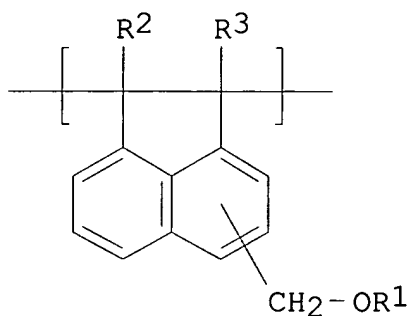
2003  
07312002  
0731

JP 2002-324709

A

2002  
1108OTHER SOURCE(S):  
GI

MARPAT 140:136438



AB Novel compds. acetoxymethylacenaphthylene and hydroxymethylacenaphthylene are disclosed. A polymer prepared from these novel compds. contains a structural unit of the formula I (R1 = H; R2,3 = monovalent atom or a monovalent organic group). The polymer is suitable as a component for an **antireflection** film-forming composition exhibiting a high **antireflection** effect and not causing intermixing with a resist film.

IT **510754-50-4P 650624-86-5P**

RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)

(acenaphthylene derivative and polymer for **antireflection** film-forming **composition**)

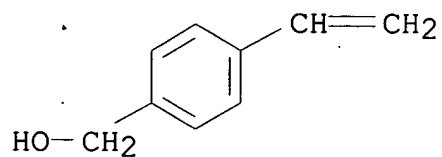
RN 510754-50-4 HCAPLUS

CN Benzenemethanol, 4-ethenyl-, polymer with acenaphthylene (9CI)  
(CA INDEX NAME)

CM 1

CRN 1074-61-9

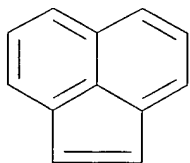
CMF C9 H10 O



CM 2

CRN 208-96-8

CMF C12 H8



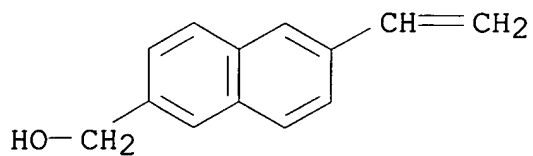
RN 650624-86-5 HCAPLUS

CN 2-Naphthalenemethanol, 6-ethenyl-, polymer with acenaphthylene  
(9CI) (CA INDEX NAME)

CM 1

CRN 650624-85-4

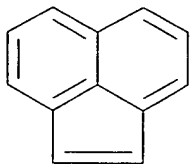
CMF C13 H12 O



CM 2

CRN 208-96-8

CMF C12 H8



IC ICM C07C033-38  
ICS C08F232-08; G03F007-09

CC 74-5 (Radiation Chemistry, Photochemistry, and  
**Photographic** and Other Reprographic Processes)  
Section cross-reference(s): 76

ST photolithog acenaphthylene deriv polymer **antireflection**  
film

IT **Antireflective** films  
(acenaphthylene derivative and polymer for **antireflection**  
film-forming composition)

IT Photolithography  
(acenaphthylene derivative and polymer for **antireflection**  
film-forming composition for)

IT **510754-50-4P** 650624-82-1P 650624-84-3P  
**650624-86-5P**  
RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical  
or engineered material use); **PREP (Preparation)**; USES  
(Uses)  
(acenaphthylene derivative and polymer for **antireflection**  
film-forming **composition**)

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE  
FOR THIS RECORD. ALL CITATIONS AVAILABLE  
IN THE RE FORMAT

L25 ANSWER 12 OF 54 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2003:947777 HCAPLUS

DOCUMENT NUMBER: 140:21269

TITLE: Positive-working photoresist composition

INVENTOR(S): Mizutani, Kazuyoshi; Kanna, Shinichi; Sasaki,  
Tomoya

PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan

SOURCE: Eur. Pat. Appl., 137 pp.  
CODEN: EPXXDW

DOCUMENT TYPE: Patent

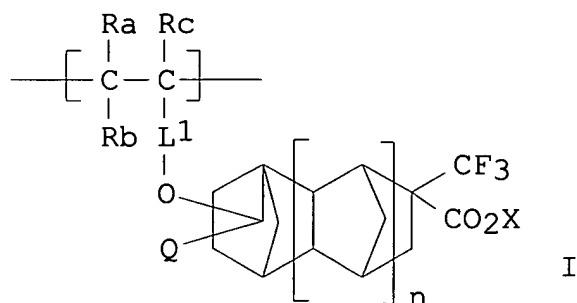
LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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EP 1367440	A2	20031203	EP 2003-12142	2003 0602
EP 1367440	A3	20040630		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
JP 2004004226	A2	20040108	JP 2002-158821	2002 0531
JP 2004004227	A2	20040108	JP 2002-158822	2002 0531
JP 2004012510	A2	20040115	JP 2002-161617	2002 0603
JP 2004125835	A2	20040422	JP 2002-285486	2002 0930
US 2004005512	A1	20040108	US 2003-448041	2003 0530
PRIORITY APPLN. INFO.:			JP 2002-158821	A 2002 0531
			JP 2002-158822	A 2002 0531
			JP 2002-161617	A 2002 0603
			JP 2002-285486	A 2002 0930



AB A pos.-working photoresist composition comprises: (A1) a resin containing a repeating unit represented by I (Ra-c = H, F, fluoroalkyl; L1 = single bond, divalent connecting group; X = H, group capable of decomposing by the action of an acid; n = 0,1; Q =H, hydroxyl group), which increases the solubility in an alkali developing solution by the action of an acid, and (B) a compound capable of generating an acid upon irradiation with one of actinic rays and radiation.

IT **630115-51-4P 630115-52-5P**

RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)

(resin for pos.-working photoresist **composition**)

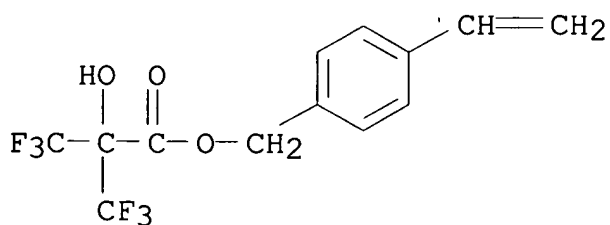
RN 630115-51-4 HCAPLUS

CN Propanoic acid, 3,3,3-trifluoro-2-hydroxy-2-(trifluoromethyl)-, (4-ethenylphenyl)methyl ester, polymer with 1-(1,1-dimethylethoxy)-4-ethenylbenzene (9CI) (CA INDEX NAME)

CM 1

CRN 630115-45-6

CMF C13 H10 F6 O3

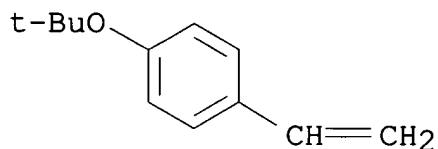


CM 2



CRN 95418-58-9

CMF C12 H16 O



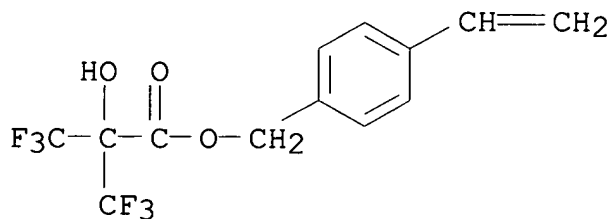
RN 630115-52-5 HCAPLUS

CN Propanoic acid, 3,3,3-trifluoro-2-hydroxy-2-(trifluoromethyl)-, (4-ethenylphenyl)methyl ester, polymer with 1-ethenyl-4-[1-(2-methylpropoxy)ethoxy]benzene (9CI) (CA INDEX NAME)

CM 1

CRN 630115-45-6

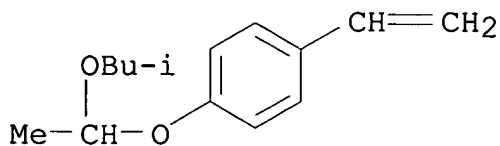
CMF C13 H10 F6 O3



CM 2

CRN 192314-53-7

CMF C14 H20 O2



IC ICM G03F007-039

ICS G03F007-004

CC 74-5 (Radiation Chemistry, Photochemistry, and

**Photographic and Other Reprographic Processes)**

Section cross-reference(s): 35, 38

IT 630115-46-7P 630115-47-8P 630115-48-9P 630115-49-0P

630115-50-3P **630115-51-4P 630115-52-5P**

630127-74-1P 630127-78-5P 630127-79-6P

RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)(resin for pos.-working photoresist **composition**)

L25 ANSWER 13 OF 54 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2003:767833 HCAPLUS

DOCUMENT NUMBER: 139:277493

TITLE: Curable compositions comprising vinyl benzyl compounds and showing good heat and moisture resistance

INVENTOR(S): Horie, Michiyasu; Ito, Mikio

PATENT ASSIGNEE(S): Sumitomo Bakelite Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	
JP 2003277442	A2	20031002	JP 2002-82005	2002 0322
			PRIORITY APPLN. INFO.: JP 2002-82005	2002 0322

AB The compns., useful for semiconductor encapsulants, prepreg laminates, molding materials, etc., comprise (a) Ni, Pd, Co, or Rh compds. and (b) 3-(or 4-)vinylbenzyl ethers of benzene, naphthalene, biphenylene, diphenylalkane, 5,5-diphenylfluorene, and/or 1,1-diphenylcyclohexane derivs. (Markushes given; each benzene ring has  $\geq 2$  vinylbenzyloxy groups). Thus, 8.0 parts 2,2-bis[4-(4-vinylbenzyloxy)phenyl]propane was kneaded with styrene 2.0, NiO 0.001, and carnauba wax 0.15 part at 80°, poured in a mold, and cured at 180° to give a plate showing water absorption 0.21% after 2-h boiling in water bath, glass transition temperature 209°, and modulus 2920 MPa at 30°.

IT **606927-40-6P**

RL: IMF (Industrial manufacture); TEM (Technical or engineered

material use); **PREP (Preparation)**; USES (Uses)  
(curable vinyl benzyl ether **compns.** containing sp. metal  
compds. and forming articles of good heat and moisture  
resistance)

RN 606927-40-6 HCAPLUS

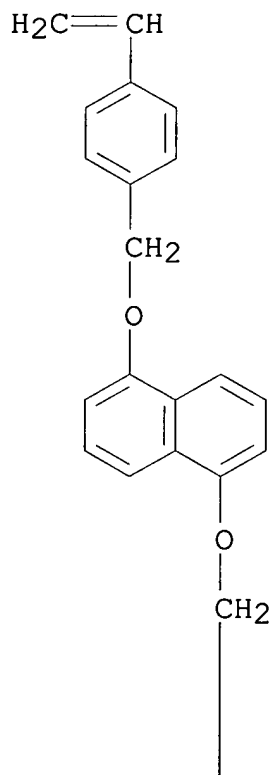
CN Naphthalene, 1,5-bis[(4-ethenylphenyl)methoxy]-, polymer with  
ethenylbenzene (9CI) (CA INDEX NAME)

CM 1

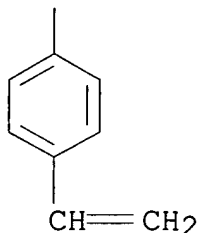
CRN 129458-79-3

CMF C28 H24 O2

PAGE 1-A



PAGE 2-A



CM 2

CRN 100-42-5

CMF C8 H8

 $\text{H}_2\text{C}=\text{CH}-\text{Ph}$ 

IC ICM C08F012-34

ICS C08F004-26

CC 37-6 (Plastics Manufacture and Processing)

Section cross-reference(s): 38, 76

IT 122106-51-8P 606927-39-3P **606927-40-6P** 606927-41-7P

606927-43-9P 606927-45-1P

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)(curable vinyl benzyl ether **compns.** containing sp. metal compds. and forming articles of good heat and moisture resistance)

L25 ANSWER 14 OF 54 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2003:506803 HCAPLUS

DOCUMENT NUMBER: 139:76436

TITLE: Unsaturated compound composition for forming light scattering/**reflecting** film and liquid crystal display device using the film

INVENTOR(S): Minowa, Takaki; Tanba, Kazuaki

PATENT ASSIGNEE(S): JSR Ltd., Japan

SOURCE: Jpn. Kokai Tokyo Koho, 14 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003183478	A2	20030703	JP 2001-389219	2001 1221
TW 555822	B	20031001	TW 2002-91104734	2002 0313
PRIORITY APPLN. INFO.:			JP 2001-73491	A 2001 0315
			JP 2001-389219	A 2001 1221

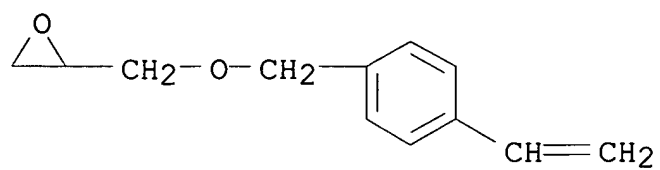
AB The composition contains a 1,2-quinonediazide and a copolymer of (a)  
an unsatd. carboxylic acid and/or its anhydride, (b) an epoxy-containing unsatd. compound, and (c) other olefins, which is made into a light scattering/**reflecting** film having a pattern. The liquid crystal display device involves the film showing enhanced adhesion to a substrate and resistance to heat and solvents.

IT **191328-50-4P**, Glycidyl methacrylate-methacrylic acid-styrene-tricyclo[5.2.1.0<sup>2,6</sup>]decan-8-yl methacrylate-p-vinylbenzyl glycidyl ether copolymer  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)  
(unsatd. compound **composition** for forming light scattering/**reflecting** film for liquid crystal display device)

RN 191328-50-4 HCAPLUS  
CN 2-Propenoic acid, 2-methyl-, polymer with ethenylbenzene, [[(4-ethenylphenyl)methoxy]methyl]oxirane, octahydro-4,7-methano-1H-inden-5-yl 2-methyl-2-propenoate and oxiranylmethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

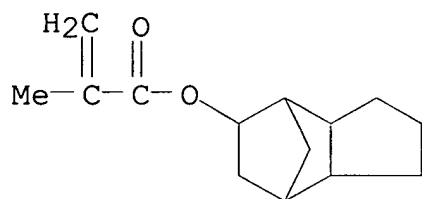
CRN 113538-80-0  
CMF C12 H14 O2



CM 2

CRN 34759-34-7

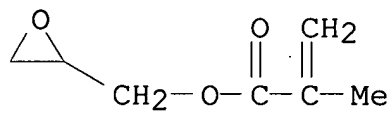
CMF C14 H20 O2



CM 3

CRN 106-91-2

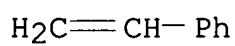
CMF C7 H10 O3



CM 4

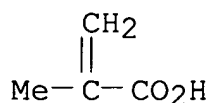
CRN 100-42-5

CMF C8 H8



CM 5

CRN 79-41-4  
CMF C4 H6 O2



- IC ICM C08L063-00  
ICS C08F212-08; C08F220-06; C08F220-18; C08F220-32; C08F232-00;  
C08K005-41; G02B005-02; G02B005-08; G02F001-1335
- CC 74-13 (Radiation Chemistry, Photochemistry, and  
**Photographic** and Other Reprographic Processes)  
Section cross-reference(s): 38, 73
- ST unsatd compd compn film formation; light scattering  
**reflecting** film display device; liq crystal display device  
**reflective** film; quinonediazide unsatd carboxylic acid  
copolymer; epoxy unsatd compd polymer film formation; olefin  
copolymer light scattering film formation
- IT Films  
(**reflective**, scattering; unsatd. compound composition for  
forming light scattering/**reflecting** film for liquid  
crystal display device)
- IT Optical **reflectors**  
(scattering; unsatd. compound composition for forming light  
scattering/**reflecting** film for liquid crystal display  
device)
- IT Light scattering  
Liquid crystal displays  
Photoimaging materials  
(unsatd. compound composition for forming light scattering/  
**reflecting** film for liquid crystal display device)
- IT 124760-77-6, 2,3,4,4'-Tetrahydroxybenzophenone  
1,2-naphthoquinonediazide-4-sulfonate 148880-97-1  
RL: TEM (Technical or engineered material use); USES (Uses)  
(in unsatd. compound composition for forming light scattering/  
**reflecting** film for liquid crystal display device)
- IT 157015-57-1P, Glycidyl methacrylate-methacrylic  
acid-styrene-tricyclo[5.2.1.0<sup>2,6</sup>]decan-8-yl methacrylate copolymer  
**191328-50-4P**, Glycidyl methacrylate-methacrylic  
acid-styrene-tricyclo[5.2.1.0<sup>2,6</sup>]decan-8-yl methacrylate-p-  
vinylbenzyl glycidyl ether copolymer 381215-27-6P 381215-29-8P  
RL: IMF (Industrial manufacture); TEM (Technical or engineered  
material use); **PREP (Preparation)**; USES (Uses)  
(unsatd. compound **composition** for forming light scattering/  
**reflecting** film for liquid crystal display device)

L25 ANSWER 15 OF 54 HCAPLUS COPYRIGHT 2005 ACS on STN  
ACCESSION NUMBER: 2003:300509 HCAPLUS  
DOCUMENT NUMBER: 138:311576  
TITLE: Pattern forming method and bilayer film  
INVENTOR(S): Iwasawa, Haruo; Hayashi, Akihiro; Shimokawa,  
Tsutomu; Kawaguchi, Kazuo; Tanaka, Masato  
PATENT ASSIGNEE(S): Japan  
SOURCE: U.S. Pat. Appl. Publ., 28 pp.  
CODEN: USXXCO  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO. -----	KIND ----	DATE -----	APPLICATION NO. -----	DATE
US 2003073040	A1	20030417	US 2002-226321	2002 0823
JP 2003149820	A2	20030521	JP 2002-244094	2002 0823
PRIORITY APPLN. INFO.:			JP 2001-254699	A 2001 0824

AB The present invention relates to a pattern forming method comprising forming a coating of a radiation-sensitive resin composition, which contains an acid-dissociable group-containing polysiloxane, alkali-insol. or scarcely alkali-soluble but becoming alkali-soluble when the acid-dissociable group dissocs., on a film containing a polymer with a carbon content of  $\geq 80\%$  and a polystyrene-reduced weight average mol. weight of 500-100,000, an applying

radiation to the coating is provided. The method can form minute patterns with a high aspect ratio by suitably selecting a specific etching gas in the dry etching process, without being affected by standing waves.

IT **510754-50-4P**

RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)

(under layer film forming **composition** containing)

RN 510754-50-4 HCAPLUS

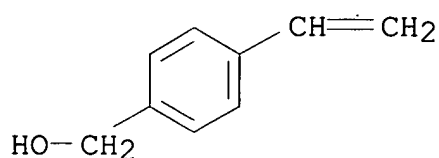
CN Benzenemethanol, 4-ethenyl-, polymer with acenaphthylene (9CI)  
(CA INDEX NAME)



CM 1

CRN 1074-61-9

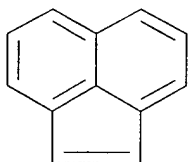
CMF C9 H10 O



CM 2

CRN 208-96-8

CMF C12 H8



IC ICM G03C005-00

NCL 430312000; 430905000; 430271100

CC 74-5 (Radiation Chemistry, Photochemistry, and  
**Photographic** and Other Reprographic Processes)

Section cross-reference(s): 35, 38

IT 30229-56-2P **510754-50-4P**RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical  
or engineered material use); **PREP (Preparation)**; USES  
(Uses)(under layer film forming **composition** containing)

L25 ANSWER 16 OF 54 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2003:58829 HCAPLUS

DOCUMENT NUMBER: 138:107615

TITLE: **Reflection**-inhibiting resin  
composition used in process for forming  
photoresist patternINVENTOR(S): Hong, Sung Eun; Jung, Min Ho; Kim, Hyeong Soo;  
Jung, Jae Chang; Baik, Ki Ho

PATENT ASSIGNEE(S): Hynix Semiconductor Inc., S. Korea

SOURCE: U.S. Pat. Appl. Publ., 16 pp., Cont.-in-part

of U.S. Ser. No. 627,713.

CODEN: USXXCO

DOCUMENT TYPE:

Patent

LANGUAGE:

English

FAMILY ACC. NUM. COUNT:

2

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2003018150	A1	20030123	US 2002-189056	2002 0703
US 6797451	B2	20040928		
KR 2001011770	A	20010215	KR 1999-31300	1999 0730
PRIORITY APPLN. INFO.:			KR 1999-31300	A 1999 0730
			US 2000-627713	A2 2000 0728

AB A composition for reducing the light **reflection** in a photoresist pattern formation comprises (a)  $[\text{CH}_2\text{CR}_1(\text{CO}_2\text{G})]_x(\text{CH}_2\text{CR}_2\text{R}_3)_y$  (G = glycidyl; R<sub>1</sub>, R<sub>2</sub> = H, OH, CH<sub>2</sub>OH, alkyl; R<sub>3</sub> = substituted aryl groups; x and y represent the relative amts. of each monomer, wherein the mole ratio of x:y is 0.0 - 0.9:0.1 - 1.0), (b) a thermal acid generator, (c) an organic solvent, and optionally (d) a polymer having hydroxyl group as a functional group. The present invention also provides methods for using the above described resin to inhibit **reflection** of light from the lower layer of a wafer substrate during a photoresist pattern formation process. A composition contained glycidyl methacrylate- $\alpha$ -methylstyrene copolymer, polyvinylphenol, and a photoacid generator in propylene glycol Me ether acetate solvent.

IT **189117-83-7P 331622-76-5P 375395-27-0P**

RL: IMF (Industrial manufacture); POF (Polymer in formulation);  
TEM (Technical or engineered material use); **PREP**  
(**Preparation**); USES (Uses)

(**reflection**-inhibiting resin **composition** used in  
process for forming photoresist pattern)

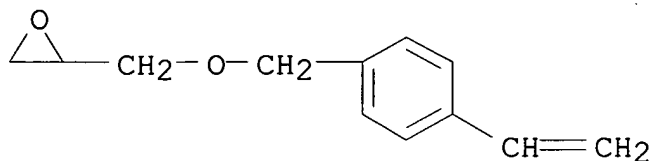
RN 189117-83-7 HCAPLUS

CN Oxirane, [[[4-ethenylphenyl)methoxy)methyl]-, homopolymer (9CI)  
(CA INDEX NAME)

CM 1

CRN 113538-80-0

CMF C12 H14 O2



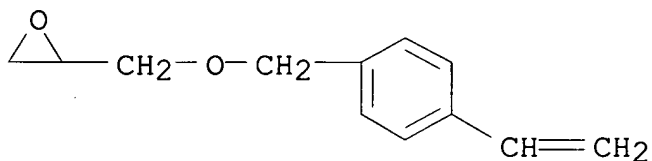
RN 331622-76-5 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, oxiranylmethyl ester, polymer with  
[[ (4-ethenylphenyl)methoxy]methyl]oxirane (9CI) (CA INDEX NAME)

CM 1

CRN 113538-80-0

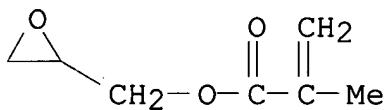
CMF C12 H14 O2



CM 2

CRN 106-91-2

CMF C7 H10 O3

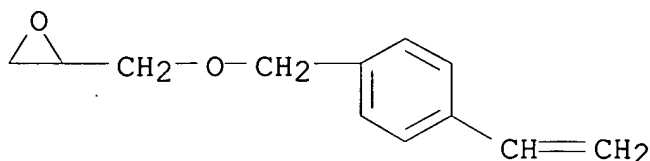


RN 375395-27-0 HCAPLUS

CN Oxirane, [[[4-ethenylphenyl)methoxy]methyl]-, polymer with  
ethenylbenzene (9CI) (CA INDEX NAME)

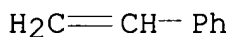
CM 1

CRN 113538-80-0  
CMF C12 H14 O2



CM 2

CRN 100-42-5  
CMF C8 H8



IC ICM C08F004-04  
NCL 526219000; 526273000; 526346000; 524228000; 524268000; 524310000;  
524315000; 525182000; 525186000  
CC 37-3 (Plastics Manufacture and Processing)  
Section cross-reference(s): 74  
ST photoresist **reflection** inhibiting resin  
IT Photoresists  
(**reflection**-inhibiting resin composition used in process  
for forming photoresist pattern)  
IT 106-91-2P, Glycidyl methacrylate 113538-80-0P 331622-73-2P  
RL: IMF (Industrial manufacture); RCT (Reactant); PREP  
(Preparation); RACT (Reactant or reagent)  
(monomer; **reflection**-inhibiting resin composition used in  
process for forming photoresist pattern)  
IT 99835-44-6 335157-24-9 348594-74-1 348594-76-3  
RL: TEM (Technical or engineered material use); USES (Uses)  
(photoacid generator; **reflection**-inhibiting resin  
composition used in process for forming photoresist pattern)  
IT 86249-18-5P, Glycidyl methacrylate- $\alpha$ -methylstyrene copolymer  
**189117-83-7P** 260369-03-7P **331622-76-5P**  
331622-77-6P **375395-27-0P** 488722-36-7P  
RL: IMF (Industrial manufacture); POF (Polymer in formulation);  
TEM (Technical or engineered material use); **PREP**  
(**Preparation**); USES (Uses)  
(**reflection**-inhibiting resin **composition** used in  
process for forming photoresist pattern)

IT 59269-51-1, Polyvinyl phenol  
 RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)  
 (**reflection**-inhibiting resin composition used in process for forming photoresist pattern)

IT 79-41-4, Methacrylic acid, reactions 106-89-8, Epichlorohydrin, reactions 556-52-5, Glycidol 814-68-6, Acryloyl chloride 1592-20-7, 4-Vinylbenzyl chloride 27955-94-8, 1,1,1-Tris(4-hydroxy phenyl)ethane  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (**reflection**-inhibiting resin composition used in process for forming photoresist pattern)

REFERENCE COUNT: 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L25 ANSWER 17 OF 54 HCAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 2002:792183 HCAPLUS  
 DOCUMENT NUMBER: 137:317954  
 TITLE: Photosensitive composition and negative working lithographic printing plate  
 INVENTOR(S): Kunita, Kazuto  
 PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan  
 SOURCE: Eur. Pat. Appl., 74 pp.  
 CODEN: EPXXDW  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1249731	A2	20021016	EP 2002-7216	2002 0327
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
JP 2002311569	A2	20021023	JP 2001-115598	2001 0413
CN 1388412	A	20030101	CN 2002-141073	2002 0327
US 2003091933	A1	20030515	US 2002-106326	2002 0327
US 6858373	B2	20050222		

PRIORITY APPLN. INFO.:

JP 2001-115598

A

2001

0413

AB The present invention relates to a photosensitive composition comprising a resin containing a repeating unit corresponding to a monomer having a structure represented by  $RaRbX1C-C(=O)Q1$  ( $Q1 = CN, COX2$ ;  $X1,2 =$  halogen, a group connected through a hetero atom;  $Ra,b = H, \text{halogen}, CN, \text{organic residue}$ ;  $X1$  and  $X2, Ra$  and  $Rb, X1$  and  $Ra$  or  $Rb$  may combine with each other to form a cyclic structure), and a neg. working lithog. printing plate having a neg. working photosensitive layer comprising the above described photosensitive composition. The present invention provides a photosensitive composition and

a neg. working lithog. printing plate, which is excellent in both the film strength of a photosensitive layer and the preservation stability in a photo-crosslinking composition that is promising in image forming techniques from the standpoint of the strength of photosensitive layer.

IT **471266-67-8P 471266-92-9P**

RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)

(photosensitive **composition** for neg. working lithog. printing plate containing)

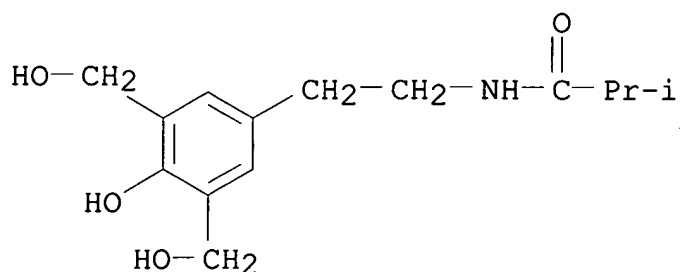
RN 471266-67-8 HCAPLUS

CN 2-Propenoic acid, 2-[(acetyloxy)methyl]-, ethyl ester, polymer with 4-ethenylphenol and N-[2-[4-hydroxy-3,5-bis(hydroxymethyl)phenyl]ethyl]-2-methylpropanamide (9CI) (CA INDEX NAME)

CM 1

CRN 244057-80-5

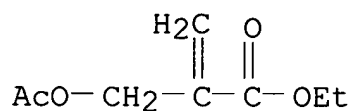
CMF C14 H21 N O4



CM 2

CRN 80787-04-8

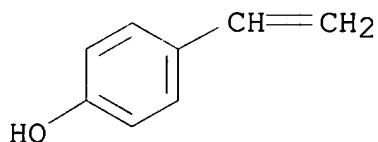
CMF C8 H12 O4



CM 3

CRN 2628-17-3

CMF C8 H8 O



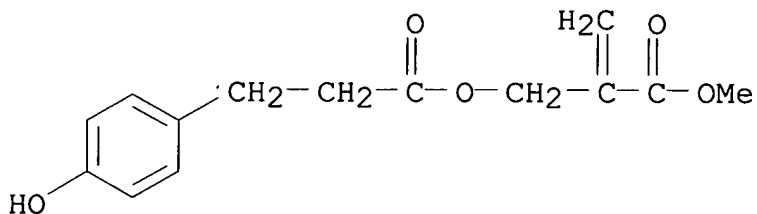
RN 471266-92-9 HCAPLUS

CN Benzenepropanoic acid, 4-hydroxy-, 2-(methoxycarbonyl)-2-propenyl ester, polymer with N-[2-[4-hydroxy-3,5-bis(hydroxymethyl)phenyl]ethyl]-2-methylpropanamide (9CI) (CA INDEX NAME)

CM 1

CRN 471266-91-8

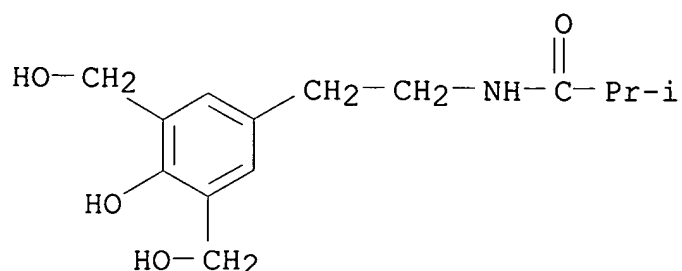
CMF C14 H16 O5



CM 2

CRN 244057-80-5

CMF C14 H21 N O4



IC ICM G03F007-027  
 CC 74-6 (Radiation Chemistry, Photochemistry, and  
**Photographic** and Other Reprographic Processes)  
 Section cross-reference(s): 35, 38  
 IT 89697-56-3DP, ion exchanged with acrylic polymers 212139-47-4DP,  
 ion exchanged with acrylic polymers 409332-98-5DP, ionic  
 crosslinking with diazo resin 471266-56-5DP, ionic crosslinking  
 with diazo resin 471266-60-1DP, ionic crosslinking with diazo  
 resin 471266-62-3DP, ionic crosslinking with diazo resin  
 471266-64-5P **471266-67-8P** 471266-70-3DP, reaction  
 product with Resol resin 471266-77-0DP, ionic crosslinking with  
 diazo resin 471266-80-5DP, ionic crosslinking with diazo resin  
 471266-82-7DP, ionic crosslinking with diazo resin 471266-85-0P  
 471266-88-3P **471266-92-9P** 471267-47-7DP, ion exchanged  
 with acrylic polymers  
 RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical  
 or engineered material use); **PREP (Preparation)**; USES  
 (Uses)  
 (photosensitive **composition** for neg. working lithog.  
 printing plate containing)

L25 ANSWER 18 OF 54 HCAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 2002:466108 HCAPLUS  
 DOCUMENT NUMBER: 137:48187  
 TITLE: Radiation-sensitive composition for forming  
 articles with tunable refractive index and  
 method for refractive index tuning  
 INVENTOR(S): Nishimura, Isao; Bessho, Nobuo; Kumano,  
 Atsushi; Shimokawa, Tsutomu; Yamada, Kenji  
 PATENT ASSIGNEE(S): JSR Corporation, Japan  
 SOURCE: PCT Int. Appl., 98 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1



## PATENT INFORMATION:

PATENT NO. -----	KIND ----	DATE -----	APPLICATION NO. -----	DATE
WO 2002048264	A1	20020620	WO 2001-JP10695	2001 1206
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
CA 2431358	AA	20020620	CA 2001-2431358	2001 1206
AU 2002022583	A5	20020624	AU 2002-22583	2001 1206
JP 2002309110	A2	20021023	JP 2001-372213	2001 1206
EP 1350814	A1	20031008	EP 2001-270574	2001 1206
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
TW 565591	B	20031211	TW 2001-90130430	2001 1207
US 2004013972	A1	20040122	US 2003-415102	2003 0430
PRIORITY APPLN. INFO.:				2000 1211
			JP 2000-375523	A
			JP 2001-7554	A
			JP 2001-29226	A

2001  
0206

JP 2001-34028 A

2001  
0209

WO 2001-JP10695 W

2001  
1206

AB The composition comprises (A) a decomposable compound, e.g., hydrolyzable

polyester and polycarbonate, (B) a nondecomposable compound having a higher refractive index than the A, e.g., silsesquioxane, (C) a radiation-sensitive decomposer, and (D) a stabilizer. When the composition is irradiated with a radiation through a pattern mask, the C and A in the irradiated areas decompose to cause a difference in refractive index between the irradiated areas and the unirradiated areas. Thus, a pattern having different refractive indexes is formed. The composition is useful for optical materials such as GRIN optical fibers and lenses, etc. (no data). Mixing a copolymer (A) of hexafluoroglutaric acid and dimethyldichlorosilane, 50, with a copolymer (B) of phenyltrimethoxysilane and diphenyldimethoxysilane, 50, 2-(4-methoxyphenyl)-4,6-bis(trichloromethyl)-s-triazine (C) and 1,4-bis(2',3'-epoxypropyl)octafluoro-n-butane 10 parts in diethylene glycol Et Me ether to a solids concentration of 20%, filtering and coating the resulting solution on a silicon wafer gave a coat film after drying which was patterned with a reduction-projective type irradiation

device

(NA 0.45,  $\lambda$  365 nm) at an exposure of 80 mJ/cm<sup>2</sup> and baked to form refractive index patterns with n 1.59 and 1.50 for high and low refractive index part, resp., and transparency 99.1 and 98.7% for high and low refractive index part, resp.

IT **437988-70-0P**, 4-Vinylbenzoic acid-4-vinylbenzyl glycidyl ether-vinylnaphthalene copolymer

RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)

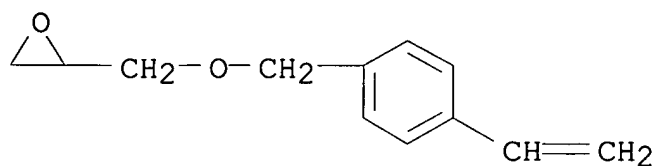
(radiation-sensitive **composition** for forming articles with tunable refractive index and method for refractive index tuning)

RN 437988-70-0 HCAPLUS

CN Benzoic acid, 4-ethenyl-, polymer with ethenylnaphthalene and [[(4-ethenylphenyl)methoxy]methyl]oxirane (9CI) (CA INDEX NAME)

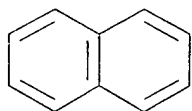
CM 1

CRN 113538-80-0  
CMF C12 H14 O2



CM 2

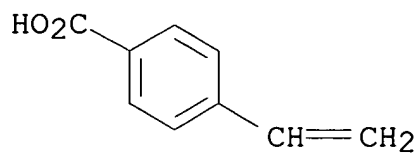
CRN 26588-32-9  
CMF C12 H10  
CCI IDS



D1- $\text{CH}=\text{CH}_2$

CM 3

CRN 1075-49-6  
CMF C9 H8 O2



IC ICM C08L101-00  
ICS G03F007-004; G03F007-38; G03F007-36  
CC 38-3 (Plastics Fabrication and Uses)  
Section cross-reference(s): 73  
IT 25735-00-6P, 3,3',4,4'-Diphenyl ether tetracarboxylic

dianhydride-4,4'-oxydianiline copolymer polyimide sru  
25736-02-1P, 3,3',4,4'-Diphenyl ether tetracarboxylic  
dianhydride-4,4'-oxydianiline copolymer 99732-53-3P  
159554-67-3P, Diphenyldimethoxysilane-phenyltrimethoxysilane  
copolymer 437988-60-8P, Dimethyldichlorosilane-  
hexafluoroglutaric acid c opolymer 437988-62-0P, Ethylene glycol  
divinyl ether-hexafluoroglutaric acid copolymer 437988-63-1P  
437988-64-2P, Dimethyldichlorosilane-2-(2,2,3,3,4,4,4-  
heptafluorobutyl)succinic acid copolymer 437988-65-3P, Ethylene  
glycol-hexafluoroglutaric dichloride copolymer 437988-66-4P,  
1,4-Dibromocyclohexane-hexafluoroglutaric acid copolymer  
437988-67-5P 437988-68-6P, 1,4-Bis(1-hydroxyethyl)cyclohexane-  
carbonochloridic acid 1,4-butanediyl ester copolymer  
437988-69-7P **437988-70-0P**, 4-Vinylbenzoic  
acid-4-vinylbenzyl glycidyl ether-vinylnaphthalene copolymer  
437988-71-1P

RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical  
or engineered material use); **PREP (Preparation)**; USES  
(Uses)

(radiation-sensitive **composition** for forming articles with  
tunable refractive index and method for refractive index  
tuning)

REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE  
FOR THIS RECORD. ALL CITATIONS AVAILABLE  
IN THE RE FORMAT

L25 ANSWER 19 OF 54 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2001:900886 HCAPLUS

DOCUMENT NUMBER: 136:45777

TITLE: Positive-working UV-sensitive material  
composition for forming black cured films in  
optical imaging devices

INVENTOR(S): Nishimura, Isao; Suzuki, Masachika; Endo,  
Masayuki

PATENT ASSIGNEE(S): Jsr Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 16 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	
JP 2001343743	A2	20011214	JP 2000-162222	2000 0531

PRIORITY APPLN. INFO.:

JP 2000-162222

2000

0531

AB The title composition contains a copolymer, 1,2-quinone diazide, and a colorant, wherein the copolymer is made of: unsat. carboxylic acids or anhydrides; epoxides having olefinic unsat. groups; and olefinic unsat. compds. excluding the above monomers. The composition provides the black layer of the improved chemical resistance.

IT **379692-04-3P**, Propylene glycol monomethyl ether acetate-4-Vinylbenzoic acid-styrene-4-Vinylbenzyl glycidyl ether-Styrene dimer copolymer **379692-06-5P**, Propylene glycol monomethyl ether acetate-4-Vinylbenzoic acid-2-Vinylbenzyl glycidyl ether-Styrene dimer-Phenylmaleimide copolymer  
RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)  
(pos.-working UV-sensitive material **composition** for forming black cured films in optical imaging devices)

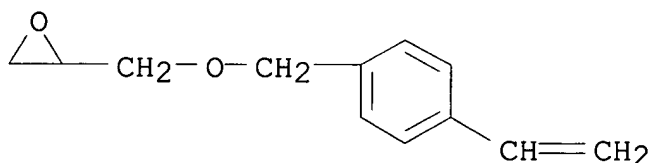
RN 379692-04-3 HCAPLUS

CN Benzoic acid, 4-ethenyl-, polymer with ethenylbenzene, ethenylbenzene dimer and [[(4-ethenylphenyl)methoxy]methyl]oxirane (9CI) (CA INDEX NAME)

CM 1

CRN 113538-80-0

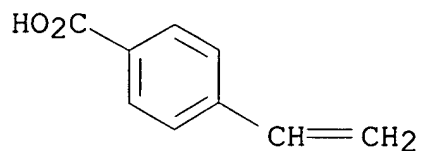
CMF C12 H14 O2



CM 2

CRN 1075-49-6

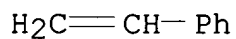
CMF C9 H8 O2



CM 3

CRN 100-42-5

CMF C8 H8



CM 4

CRN 25247-68-1

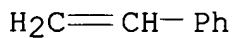
CMF (C8 H8) 2

CCI PMS

CM 5

CRN 100-42-5

CMF C8 H8



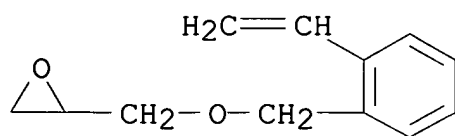
RN 379692-06-5 HCAPLUS

CN Benzoic acid, 4-ethenyl-, polymer with ethenylbenzene dimer,  
[[ (2-ethenylphenyl)methoxy]methyl]oxirane and 1-phenyl-1H-pyrrole-  
2,5-dione (9CI) (CA INDEX NAME)

CM 1

CRN 379692-05-4

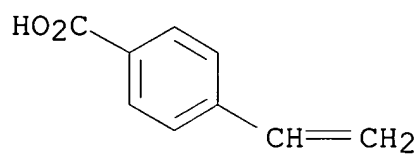
CMF C12 H14 O2



CM 2

CRN 1075-49-6

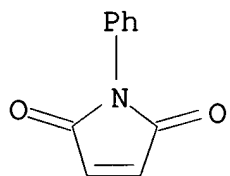
CMF C9 H8 O2



CM 3

CRN 941-69-5

CMF C10 H7 N O2



CM 4

CRN 25247-68-1

CMF (C8 H8) 2

CCI PMS

CM 5

CRN 100-42-5

CMF C8 H8

$\text{H}_2\text{C}=\text{CH}-\text{Ph}$

IC ICM G03F007-032  
 ICS C08K005-28; C08L033-00; C08L057-00; G02B005-00; G02B005-20;  
 G02F001-1335; G03F007-004; G03F007-022; G09F009-30  
 CC 74-13 (Radiation Chemistry, Photochemistry, and  
**Photographic** and Other Reprographic Processes)  
 IT **379692-04-3P**, Propylene glycol monomethyl ether  
 acetate-4-Vinylbenzoic acid-styrene-4-Vinylbenzyl glycidyl  
 ether-Styrene dimer copolymer **379692-06-5P**, Propylene  
 glycol monomethyl ether acetate-4-Vinylbenzoic acid-2-Vinylbenzyl  
 glycidyl ether-Styrene dimer-Phenylmaleimide copolymer  
 RL: SPN (Synthetic preparation); TEM (Technical or engineered  
 material use); **PREP (Preparation)**; USES (Uses)  
 (pos.-working UV-sensitive material **composition** for  
 forming black cured films in optical imaging devices)

L25 ANSWER 20 OF 54 HCAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 2001:796369 HCAPLUS  
 DOCUMENT NUMBER: 135:337051  
 TITLE: Radiation sensitive resin composition for  
 forming barrier ribs for an electroluminescent  
 display element, barrier ribs and  
 electroluminescent display element  
 INVENTOR(S): Nishimura, Isao; Suzuki, Masayoshi; Endo,  
 Masayuki  
 PATENT ASSIGNEE(S): Jsr Corporation, Japan  
 SOURCE: Eur. Pat. Appl., 25 pp.  
 CODEN: EPXXDW  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	
EP 1150165	A1	20011031	EP 2001-109937	2001 0424
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
JP 2001302870	A2	20011031	JP 2000-123586	2000 0425
JP 2002083688	A2	20020322	JP 2000-273214	2000



US 2001044075            A1        20011122        US 2001-840130  
  
US 6756165            B2        20040629  
TW 574600            B        20040201        TW 2001-90109944

0908

2001  
04242001  
0425

PRIORITY APPLN. INFO.:

JP 2000-123586        A

2000  
0425

JP 2000-273214        A

2000  
0908

AB    The invention is about radiation sensitive resin composition suitable for use as a material for forming barrier rib for an EL display element. The radiation sensitive resin composition containing (a) an alkali soluble resin, (b) a polymerizable compound having an ethylenically unsatd. bond, and (c) a radiation sensitive

polymerization

initiator. The barrier rib for an EL display element in this invention has required heat resistance, adhesion and an inversely tapered form.

IT    **369644-99-5P**,  $\alpha$ -Methylstyrene dimer-phenylmaleimide-styrene-4-vinylbenzoic acid-4-vinylbenzyl glycidyl ether copolymer  
RL: NUU (Other use, unclassified); SPN (Synthetic preparation);

**PREP (Preparation);** USES (Uses)

(preparation of radiation sensitive resin **composition** for electroluminescent display element)

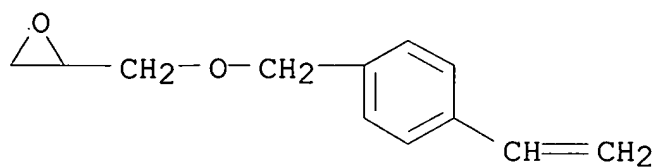
RN    369644-99-5    HCAPLUS

CN    Benzoic acid, 4-ethenyl-, polymer with ethenylbenzene, [[(4-ethenylphenyl)methoxy]methyl]oxirane, (1-methylethenyl)benzene dimer and 1-phenyl-1H-pyrrole-2,5-dione (9CI) (CA INDEX NAME)

CM    1

CRN   113538-80-0

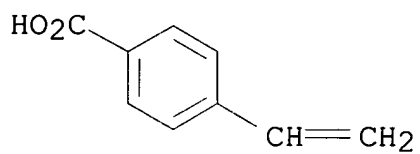
CMF   C12 H14 O2



CM 2

CRN 1075-49-6

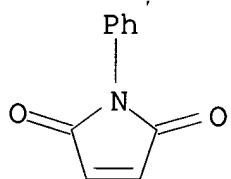
CMF C9 H8 O2



CM 3

CRN 941-69-5

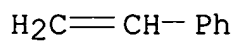
CMF C10 H7 N O2



CM 4

CRN 100-42-5

CMF C8 H8

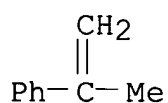


CM 5

CRN 6144-04-3  
 CMF (C9 H10)2  
 CCI PMS

CM 6

CRN 98-83-9  
 CMF C9 H10



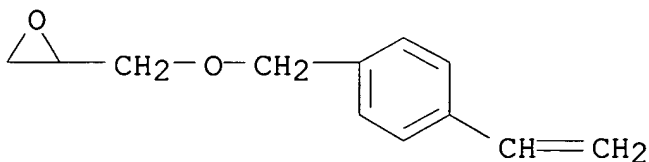
IT **370070-65-8P**, Kayarad DPHA- $\alpha$ -methylstyrene  
 dimer-phenylmaleimide-styrene-4-vinylbenzoic acid-4-  
 vinylbenzylglycidyl ether copolymer  
 RL: DEV (Device component use); SPN (Synthetic preparation);  
**PREP (Preparation)**; USES (Uses)  
 (radiation sensitive resin **composition** for forming barrier  
 ribs for electroluminescent display element)

RN 370070-65-8 HCAPLUS

CN Benzoic acid, 4-ethenyl-, polymer with ethenylbenzene,  
 [[(4-ethenylphenyl)methoxy)methyl]oxirane, (1-  
 methylethenyl)benzene dimer, 2,2'-[oxybis(methylene)]bis[2-  
 (hydroxymethyl)-1,3-propanediol] 2-propenoate and  
 1-phenyl-1H-pyrrole-2,5-dione (9CI) (CA INDEX NAME)

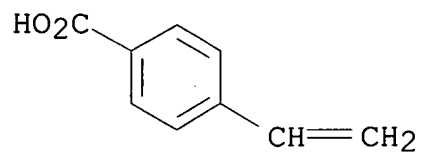
CM 1

CRN 113538-80-0  
 CMF C12 H14 O2



CM 2

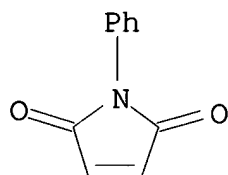
CRN 1075-49-6  
 CMF C9 H8 O2



CM 3

CRN 941-69-5

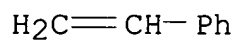
CMF C10 H7 N O2



CM 4

CRN 100-42-5

CMF C8 H8



CM 5

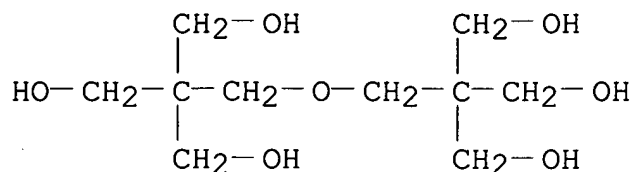
CRN 77641-99-7

CMF C10 H22 O7 . x C3 H4 O2

CM 6

CRN 126-58-9

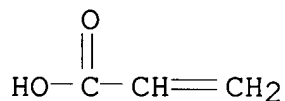
CMF C10 H22 O7



CM 7

CRN 79-10-7

CMF C3 H4 O2



CM 8

CRN 6144-04-3

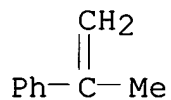
CMF (C9 H10)2

CCI PMS

CM 9

CRN 98-83-9

CMF C9 H10



IC ICM G03F007-00

ICS G03F007-032; G03F007-033; H05B033-00

CC 74-13 (Radiation Chemistry, Photochemistry, and  
**Photographic** and Other Reprographic Processes)  
 Section cross-reference(s): 35, 38

IT 27029-76-1P, m-Cresol-p-cresol-formaldehyde copolymer  
 157015-57-1P, Dicyclopentanyl methacrylate-glycidyl  
 methacrylate-methacrylic acid-styrene copolymer 163392-26-5P,  
 1,3-Butadiene-dicyclopentanyl methacrylate-methacrylic  
 acid-styrene copolymer 187601-74-7DP, hydrolyzed 369644-95-1P,

Dicyclopentanyl methacrylate- $\alpha$ -methylstyrene  
dimer- $\beta$ -methylglycidyl methacrylate-methacrylic acid-styrene  
copolymer 369644-96-2P, 1,3-Butadiene-dicyclopentanyl  
methacrylate-glycidyl methacrylate-methacrylic  
acid- $\alpha$ -methylstyrene dimer-styrene copolymer 369644-97-3P,  
1,3-Butadiene-dicyclopentanyl methacrylate-methacrylic  
acid- $\beta$ -methylglycidyl methacrylate- $\alpha$ -methylstyrene  
dimer-styrene copolymer 369644-98-4P, 1,3-Butadiene-N-  
cyclohexylmaleimide-dicyclopentanyl methacrylate-methacrylic  
acid- $\beta$ -methylglycidyl methacrylate- $\alpha$ -methylstyrene  
dimer-styrene copolymer **369644-99-5P**,  
 $\alpha$ -Methylstyrene dimer-phenylmaleimide-styrene-4-vinylbenzoic  
acid-4-vinylbenzyl glycidyl ether copolymer  
RL: NUU (Other use, unclassified); SPN (Synthetic preparation);  
**PREP (Preparation)**; USES (Uses)

(preparation of radiation sensitive resin **composition** for  
electroluminescent display element)

IT 264192-15-6P, Dicyclopentanyl methacrylate-glycidyl  
methacrylate-Kayarad dpha-methacrylic acid-styrene copolymer  
370070-59-0P, m-Cresol-p-cresol-formaldehyde-Kayarad DPHA  
copolymer 370070-60-3P, 1,3-Butadiene-dicyclopentanyl  
methacrylate-Kayarad DPHA-methacrylic acid-styrene copolymer  
370070-61-4P, Dicyclopentanyl methacrylate-Kayarad  
DPHA- $\alpha$ -methylstyrene dimer- $\beta$ -methylglycidyl  
methacrylate-methacrylic acid-styrene copolymer 370070-62-5P,  
1,3-Butadiene-dicyclopentanyl methacrylate-glycidyl  
methacrylate-Kayarad DPHA-methacrylic acid- $\alpha$ -methylstyrene  
dimer-styrene copolymer 370070-63-6P 370070-64-7P,  
1,3-Butadiene-cyclohexylmaleimide-dicyclopentanyl  
methacrylate-Kayarad DPHA-methacrylic acid- $\beta$ -methylglycidyl  
methacrylate- $\alpha$ -methylstyrene dimer-styrene copolymer  
**370070-65-8P**, Kayarad DPHA- $\alpha$ -methylstyrene  
dimer-phenylmaleimide-styrene-4-vinylbenzoic acid-4-  
vinylbenzylglycidyl ether copolymer  
RL: DEV (Device component use); SPN (Synthetic preparation);  
**PREP (Preparation)**; USES (Uses)

(radiation sensitive resin **composition** for forming barrier  
ribs for electroluminescent display element)

REFERENCE COUNT: 17 THERE ARE 17 CITED REFERENCES AVAILABLE  
FOR THIS RECORD. ALL CITATIONS AVAILABLE  
IN THE RE FORMAT

L25 ANSWER 21 OF 54 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2001:210126 HCAPLUS

DOCUMENT NUMBER: 134:259222

TITLE: Negatively working photosensitive composition  
and presensitized lithographic plate using it

INVENTOR(S): Furukawa, Akira

PATENT ASSIGNEE(S): Mitsubishi Paper Mills, Ltd., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 19 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2001075277	A2	20010323	JP 1999-251162	1999 0906

PRIORITY APPLN. INFO.: JP 1999-251162  
1999  
0906

AB The composition comprises SH-pendent heterocycle-containing polymers and

photoacid generators. The presensitized lithog. plate using the above composition is also claimed. The composition shows high sensitivity in near-IR region and gave lithog. platess with improved printability.

IT **330801-48-4DP**, Reaction product with 2-amino-5-mercapto-1,3,4-thiadiazole

RL: DEV (Device component use); PNU (Preparation, unclassified); TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)

(neg. working photosensitive **composition** for presensitized lithog. plate)

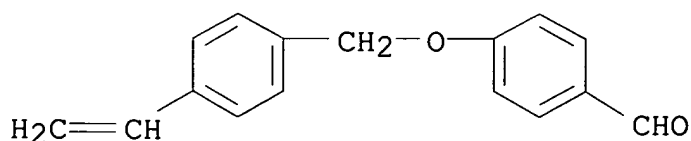
RN 330801-48-4 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, polymer with 4-[(4-ethenylphenyl)methoxy]benzaldehyde (9CI) (CA INDEX NAME)

CM 1

CRN 70818-22-3

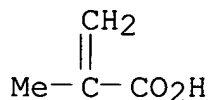
CMF C16 H14 O2



CM 2

CRN 79-41-4

CMF C4 H6 O2



IC ICM G03F007-032

ICS G03F007-00; G03F007-004

CC 74-6 (Radiation Chemistry, Photochemistry, and  
**Photographic** and Other Reprographic Processes)IT 2349-67-9DP, 2-Amino-5-mercapto-1,3,4-thiadiazole, Reaction  
product with methacrylic acid-4-vinylbenzyloxybenzaldehyde  
copolymer **330801-48-4DP**, Reaction product with  
2-amino-5-mercapto-1,3,4-thiadiazole 330801-49-5P

RL: DEV (Device component use); PNU (Preparation, unclassified);

TEM (Technical or engineered material use); **PREP****(Preparation)**; USES (Uses)(neg. working photosensitive **composition** for presensitized  
lithog. plate)

L25 ANSWER 22 OF 54 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2001:137496 HCAPLUS

DOCUMENT NUMBER: 134:170838

TITLE: Water-processable photoresist compositions

INVENTOR(S): Yamada, Shintaro; Rager, Timo; Willson, C.  
GrantPATENT ASSIGNEE(S): Board of Regents, University of Texas System,  
USA

SOURCE: PCT Int. Appl., 47 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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WO 2001013179	A1	20010222	WO 2000-US22314	

2000  
0814

W: CA, JP, KR



RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU,  
MC, NL, PT, SE

US 6399273 B1 20020604 US 2000-639382

2000  
0814

EP 1240552 A1 20020918 EP 2000-955540

2000  
0814

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE,  
MC, PT, IE, FI, CY

JP 2003507759 T2 20030225 JP 2001-517217

2000  
0814

PRIORITY APPLN. INFO.:

US 1999-148836P P

1999  
0813

US 1999-149622P P

1999  
0816

WO 2000-US22314 W

2000  
0814

AB The invention relates to water-processable photoresist compns.  
H2O-processable pos.-tone photoresists comprising a H2O-soluble  
polymer, wherein the polymer contains a heat-labile functional  
group that renders the polymer insol. in H2O or an aqueous base upon  
heat treatment, and an acid-labile functional group that restores  
the H2O or aqueous base solubility to the polymer upon irradiation in  
the presence of a H2O-processable photoacid generator, are described.  
Also described are the methods of making such polymers and  
photoresists.

IT **324740-27-4P 324740-28-5P**

RL: POF (Polymer in formulation); SPN (Synthetic preparation);  
**PREP (Preparation)**; USES (Uses)

(synthesis of polymer for water-processable photoresist  
compns. using)

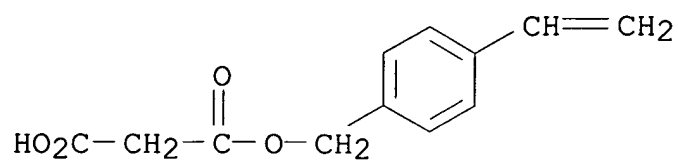
RN 324740-27-4 HCAPLUS

CN Propanedioic acid, mono[(4-ethenylphenyl)methyl] ester, polymer  
with 1,1-dimethylethyl 4-ethenylbenzeneacetate and 4-ethenylphenyl  
acetate (9CI) (CA INDEX NAME)

CM 1

CRN 324740-20-7

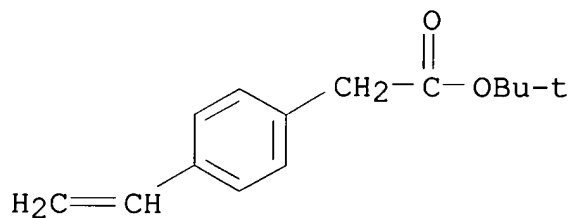
CMF C12 H12 O4



CM 2

CRN 152845-13-1

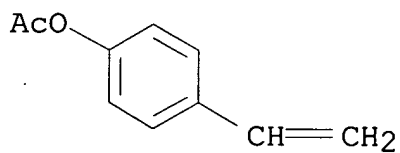
CMF C14 H18 O2



CM 3

CRN 2628-16-2

CMF C10 H10 O2



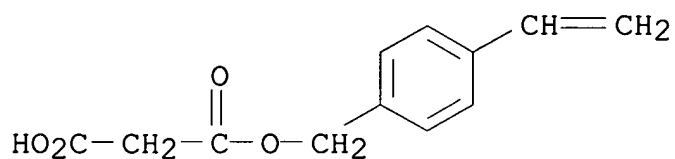
RN 324740-28-5 HCAPLUS

CN Propanedioic acid, mono[(4-ethenylphenyl)methyl] ester, polymer  
with 1,1-dimethylethyl 4-ethenylbenzeneacetate and 4-ethenylphenol  
(9CI) (CA INDEX NAME)

CM 1

CRN 324740-20-7

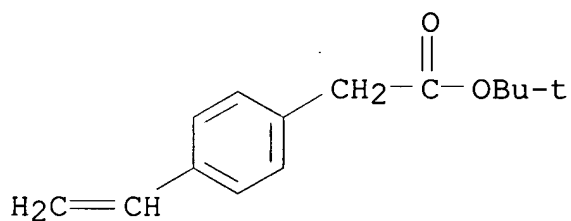
CMF C12 H12 O4



CM 2

CRN 152845-13-1

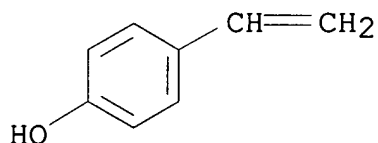
CMF C14 H18 O2



CM 3

CRN 2628-17-3

CMF C8 H8 O



IT 324740-21-8P 324740-23-0P

RL: RCT (Reactant); SPN (Synthetic preparation); **PREP****(Preparation)**; RACT (Reactant or reagent)(synthesis of polymer for water-processable photoresist  
**compns.** using)

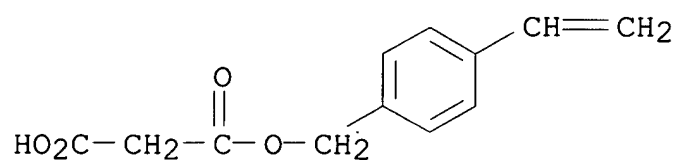
RN 324740-21-8 HCAPLUS

CN Propanedioic acid, mono[(4-ethenylphenyl)methyl] ester, polymer  
with 1,1-dimethylethyl 2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 324740-20-7

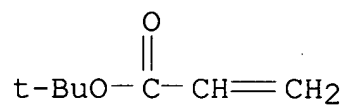
CMF C12 H12 O4



CM 2

CRN 1663-39-4

CMF C7 H12 O2



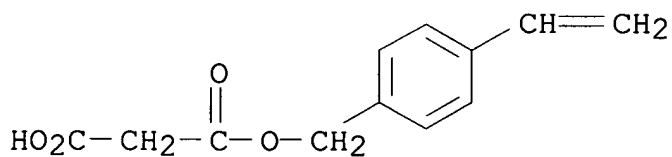
RN 324740-23-0 HCAPLUS

CN Propanedioic acid, mono[(4-ethenylphenyl)methyl] ester, ammonium salt, polymer with 1,1-dimethylethyl 2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 324740-22-9

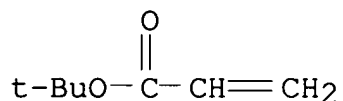
CMF C12 H12 O4 . H3 N

● NH<sub>3</sub>

CM 2

CRN 1663-39-4

CMF C7 H12 O2

IT **324740-24-1P**RL: SPN (Synthetic preparation); **PREP (Preparation)**(synthesis of polymer for water-processable photoresist  
**compns.** using)

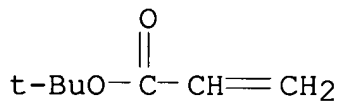
RN 324740-24-1 HCAPLUS

CN 2-Propenoic acid, 1,1-dimethylethyl ester, polymer with  
(4-ethenylphenyl)methyl acetate (9CI) (CA INDEX NAME)

CM 1

CRN 1663-39-4

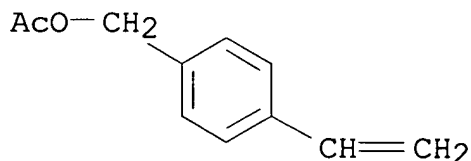
CMF C7 H12 O2



CM 2

CRN 1592-12-7

CMF C11 H12 O2



IC ICM G03F007-00

ICS G03F007-38; C08F008-48; C08F246-00; G03C001-00

CC 74-5 (Radiation Chemistry, Photochemistry, and  
**Photographic** and Other Reprographic Processes)

IT **324740-27-4P 324740-28-5P**

RL: POF (Polymer in formulation); SPN (Synthetic preparation);

**PREP (Preparation)**; USES (Uses)

(synthesis of polymer for water-processable photoresist  
**compns.** using)

IT 37472-52-9P 324740-06-9P 324740-07-0P 324740-08-1P  
324740-10-5P 324740-11-6P 324740-12-7P 324740-14-9P  
324740-15-0P 324740-16-1P 324740-17-2P 324740-18-3P  
324740-19-4P **324740-21-8P 324740-23-0P**  
324740-25-2P

RL: RCT (Reactant); SPN (Synthetic preparation); **PREP**

**(Preparation)**; RACT (Reactant or reagent)

(synthesis of polymer for water-processable photoresist  
**compns.** using)

IT 324740-13-8P **324740-24-1P** 324740-26-3P

RL: SPN (Synthetic preparation); **PREP (Preparation)**

(synthesis of polymer for water-processable photoresist  
**compns.** using)

REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE  
FOR THIS RECORD. ALL CITATIONS AVAILABLE  
IN THE RE FORMAT

L25 ANSWER 23 OF 54 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2001:98653 HCAPLUS

DOCUMENT NUMBER: 134:155272

TITLE: Photosensitive resin composition containing  
triazine-substituted polymer and material for  
presensitized plate

INVENTOR(S): Furukawa, Akira; Doi, Kunihiro

PATENT ASSIGNEE(S): Mitsubishi Paper Mills, Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 17 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	
JP 2001033962	A2	20010209	JP 1999-207132	

1999  
0722

PRIORITY APPLN. INFO.: JP 1999-207132

1999  
0722

AB The composition contains a polymer having haloalkyl-substituted

triazine groups on side chains. The composition may further contain a colorant absorbing light of a wavelength ranged from visible ray to near IR. The photosensitive lithog. plate uses the composition showing improved storage stability and high sensitivity.

IT **324524-34-7P 324524-35-8P**

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)  
(photosensitive **composition** containing polymer having haloalkyl-substituted triazine on side chain for presensitized plate)

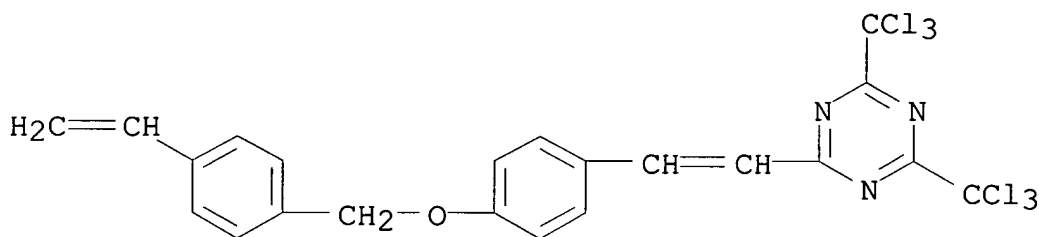
RN 324524-34-7 HCAPLUS

CN 2-Propenoic acid, polymer with butyl 2-propenoate and 2-[2-[4-[(4-ethenylphenyl)methoxy]phenyl]ethenyl]-4,6-bis(trichloromethyl)-1,3,5-triazine (9CI) (CA INDEX NAME)

CM 1

CRN 324524-33-6

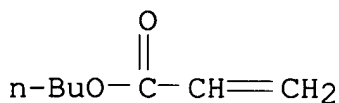
CMF C22 H15 Cl6 N3 O



CM 2

CRN 141-32-2

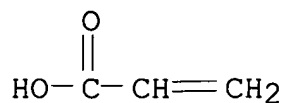
CMF C7 H12 O2



CM 3

CRN 79-10-7

CMF C3 H4 O2



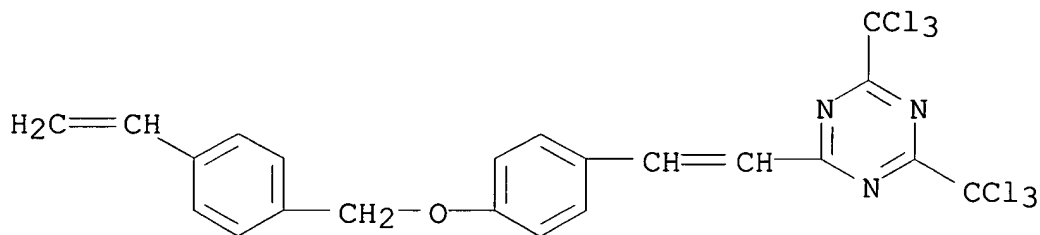
RN 324524-35-8 HCAPLUS

CN 2-Propenoic acid, polymer with 4-[(4-ethenylphenyl)methoxy]benzaldehyde, 2-[2-[4-[(4-ethenylphenyl)methoxy]phenyl]ethenyl]-4,6-bis(trichloromethyl)-1,3,5-triazine and 1-methylethyl 2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 324524-33-6

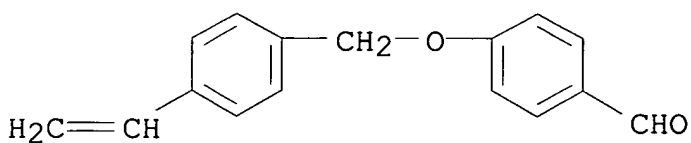
CMF C22 H15 Cl6 N3 O



CM 2

CRN 70818-22-3

CMF C16 H14 O2

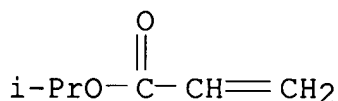


CM 3

CRN 689-12-3

CMF C6 H10 O2

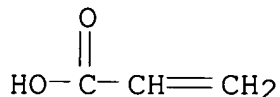




CM 4

CRN 79-10-7

CMF C3 H4 O2



IC ICM G03F007-038

ICS C08L039-04; G03F007-00; G03F007-004

CC 74-6 (Radiation Chemistry, Photochemistry, and  
**Photographic** and Other Reprographic Processes)  
Section cross-reference(s): 38

IT **324524-34-7P 324524-35-8P**

RL: IMF (Industrial manufacture); TEM (Technical or engineered  
material use); **PREP (Preparation)**; USES (Uses)  
(photosensitive **composition** containing polymer having  
haloalkyl-substituted triazine on side chain for presensitized  
plate)

L25 ANSWER 24 OF 54 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2000:835234 HCAPLUS

DOCUMENT NUMBER: 134:23589

TITLE: Radiation-sensitive unsaturated epoxy resin  
composition for protecting film for color  
filter or spacer associated with intermediate  
electric insulator film among thin film  
transistors

INVENTOR(S): Takeuchi, Nobuhiro; Nishio, Toshihiro; Tanba,  
Kazuaki; Endo, Masayuki

PATENT ASSIGNEE(S): JSR Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 12 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000327875	A2	20001128	JP 1999-141134	1999 0521

PRIORITY APPLN. INFO.: JP 1999-141134

1999  
0521

AB The composition contains 1,2-quinonediazide and a copolymer of (a) unsatd. carboxylic acid and/or its anhydride, (b) unsatd. epoxy compound, and (c) other olefin-type unsatd. compound The composition, used for protecting color filter or for forming the spacer, shows improved resistance to rubbing and retention of shape under heating.

IT **173027-33-3P**, Glycidyl methacrylate-methacrylic acid-p-vinylbenzyl glycidyl ether-styrene copolymer  
 RL: DEV (Device component use); IMF (Industrial manufacture);  
**PREP (Preparation)**; USES (Uses)  
 (unsatd. epoxy resin **composition** for color filter-protecting film or spacer associated with intermediate elec. insulator film among thin film transistor)

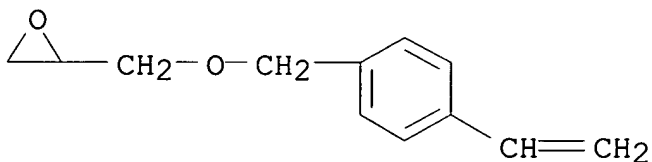
RN 173027-33-3 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, polymer with ethenylbenzene, [[(4-ethenylphenyl)methoxy]methyl]oxirane and oxiranylmethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 113538-80-0

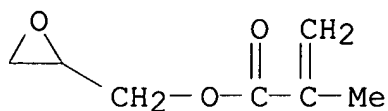
CMF C12 H14 O2



CM 2

CRN 106-91-2

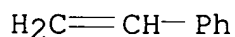
CMF C7 H10 O3



CM 3

CRN 100-42-5

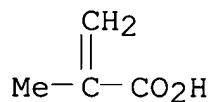
CMF C8 H8



CM 4

CRN 79-41-4

CMF C4 H6 O2



IC ICM C08L033-06

ICS C08K005-28; G02B005-20; G03F007-022; G03F007-032;  
G02F001-1333CC 74-13 (Radiation Chemistry, Photochemistry, and  
**Photographic** and Other Reprographic Processes)

Section cross-reference(s): 38, 76

IT 58353-15-4P, Glycidyl methacrylate-methacrylic acid-styrene  
copolymer 157015-57-1P, Dicyclopentanyl methacrylate-glycidyl  
methacrylate-methacrylic acid-styrene copolymer 157015-60-6P,  
1,3-Butadiene-dicyclopentanyl methacrylate-glycidyl  
methacrylate-methacrylic acid-styrene copolymer**173027-33-3P**, Glycidyl methacrylate-methacrylic  
acid-p-vinylbenzyl glycidyl ether-styrene copolymer

RL: DEV (Device component use); IMF (Industrial manufacture);

**PREP (Preparation); USES (Uses)**(unsatd. epoxy resin **composition** for colorfilter-protecting film or spacer associated with intermediate  
elec. insulator film among thin film transistor)

ACCESSION NUMBER: 2000:768967 HCAPLUS  
 DOCUMENT NUMBER: 133:357237  
 TITLE: Photoresist compositions  
 INVENTOR(S): Smith, Thomas W.; Luca, David J.; McGrane, Kathleen M.  
 PATENT ASSIGNEE(S): Xerox Corporation, USA  
 SOURCE: U.S., 66 pp.  
 CODEN: USXXAM  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO. -----	KIND ----	DATE -----	APPLICATION NO. -----	DATE
US 6139920	A	20001031	US 1998-217330	1998 1221
US 6260949	B1	20010717	US 2000-590927	2000 0609

PRIORITY APPLN. INFO.: US 1998-217330 A3  
 1998  
 1221

AB Disclosed is a composition comprising a blend of (a) a thermally reactive polymer selected from the group consisting of resoles, novolacs, thermally reactive polyarylene ethers, and mixts. thereof; and (b) a photoreactive epoxy resin that is photoreactive in the absence of a photocationic initiator.

IT **304865-55-2P**

RL: POF (Polymer in formulation); SPN (Synthetic preparation); TEM (Technical or engineered material use); **PREP (Preparation)**  
 ; USES (Uses)  
 (photoresist **compns.**)

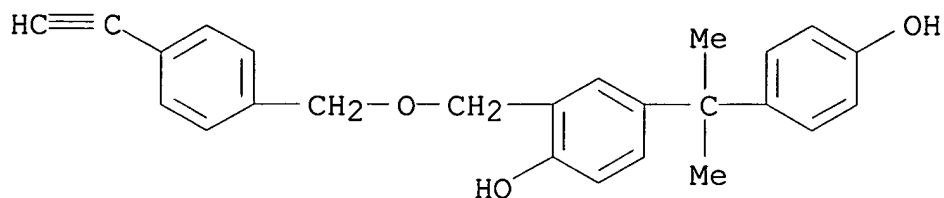
RN 304865-55-2 HCAPLUS

CN Methanone, bis(4-chlorophenyl)-, polymer with 2-[[[4-ethynylphenyl)methoxy)methyl]-4-[1-(4-hydroxyphenyl)-1-methylethyl]phenol (9CI) (CA INDEX NAME)

CM 1

CRN 304865-54-1

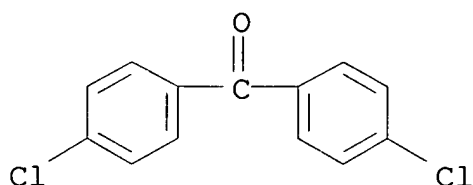
CMF C25 H24 O3



CM 2

CRN 90-98-2

CMF C13 H8 Cl2 O



IC ICM G03F007-038

ICS C08L063-10; C08L063-04; C08L071-12

NCL 427510000

CC 74-5 (Radiation Chemistry, Photochemistry, and  
**Photographic** and Other Reprographic Processes)  
 Section cross-reference(s): 35, 38

IT 25667-42-9DP, hydroxy-terminated 41205-96-3DP, chloromethylated,  
 acetates or ethenyl, ethynyl or epoxy derivs. 41205-96-3P  
 41206-07-9DP, chloromethylated 69266-28-0P 107087-84-3DP,  
 chloromethylated 107087-84-3P 113736-28-0P 122325-09-1P  
 154135-49-6P 203458-17-7P 203458-18-8P 304865-45-0P  
 304865-53-0P **304865-55-2P**

RL: POF (Polymer in formulation); SPN (Synthetic preparation); TEM  
 (Technical or engineered material use); **PREP (Preparation)**  
 ; USES (Uses)

(photoresist **compns.**)

REFERENCE COUNT:

44

THERE ARE 44 CITED REFERENCES AVAILABLE  
 FOR THIS RECORD. ALL CITATIONS AVAILABLE  
 IN THE RE FORMAT

L25 ANSWER 26 OF 54 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2000:705352 HCAPLUS

DOCUMENT NUMBER: 133:303568

TITLE: Light-sensitive composition for

INVENTOR(S): light-sensitive lithographic plate  
 Furukawa, Akira; Mitsui, Shinobu  
 PATENT ASSIGNEE(S): Mitsubishi Paper Mills, Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000275822	A2	20001006	JP 1999-80651	1999 0325
PRIORITY APPLN. INFO.:				JP 1999-80651 1999 0325

AB The title composition contains an azide and a polymer with a side chain having a furan group. The composition provide the lithog. plate of high sensitivity and the excellent printing characteristics.

IT **291775-92-3P 291775-93-4P**

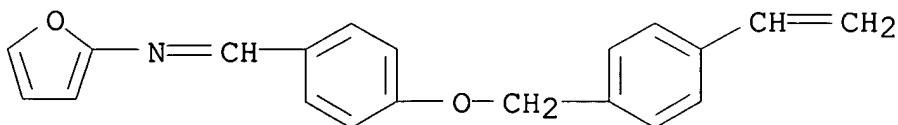
RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)  
 (polymer in light-sensitive material **composition**)

RN 291775-92-3 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, polymer with N-[[4-[(4-ethenylphenyl)methoxy]phenyl]methylene]-2-furanamine (9CI) (CA INDEX NAME)

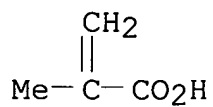
CM 1

CRN 291775-91-2  
 CMF C20 H17 N O2



CM 2

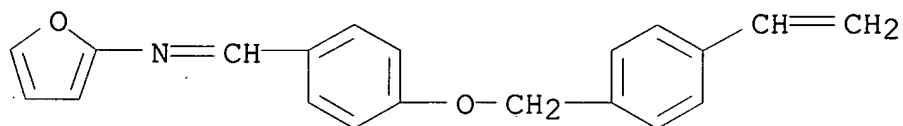
CRN 79-41-4  
CMF C4 H6 O2



RN 291775-93-4 HCAPLUS  
CN 2-Propenoic acid, 2-methyl-, polymer with butyl  
2-methyl-2-propenoate and N-[[4-[(4-ethenylphenyl)methoxy]phenyl]m  
ethylene]-2-furanamine (9CI) (CA INDEX NAME)

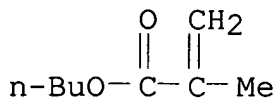
CM 1

CRN 291775-91-2  
CMF C20 H17 N O2



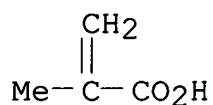
CM 2

CRN 97-88-1  
CMF C8 H14 O2



CM 3

CRN 79-41-4  
CMF C4 H6 O2



IC ICM G03F007-00  
 ICS G03F007-004; G03F007-008; G03F007-033  
 CC 74-6 (Radiation Chemistry, Photochemistry, and  
**Photographic** and Other Reprographic Processes)  
 IT **291775-92-3P 291775-93-4P**  
 RL: SPN (Synthetic preparation); TEM (Technical or engineered  
 material use); **PREP (Preparation)**; USES (Uses)  
 (polymer in light-sensitive material **composition**)

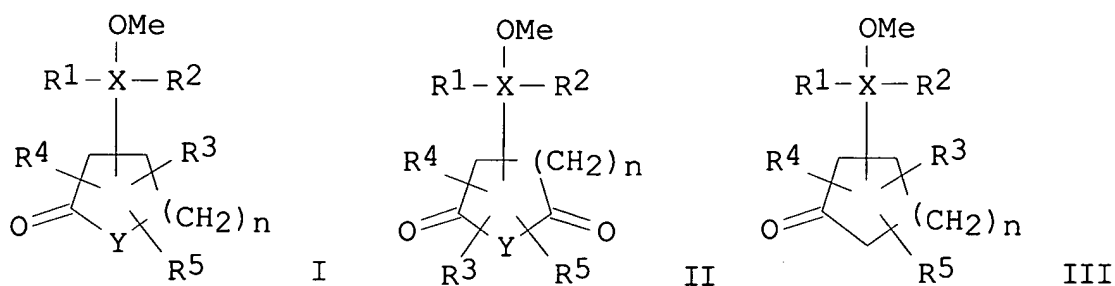
L25 ANSWER 27 OF 54 HCAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 2000:686614 HCAPLUS  
 DOCUMENT NUMBER: 133:274251  
 TITLE: Positively-working photoresist composition for  
 far-ultraviolet ray photolithography  
 INVENTOR(S): Kodama, Kunihiro; Sato, Kenichiro; Aogo,  
 Toshiaki  
 PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 62 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 2  
 PATENT INFORMATION:

PATENT NO. -----	KIND ----	DATE -----	APPLICATION NO. -----	DATE
JP 2000267287	A2	20000929	JP 1999-186809	1999 0630
KR 2000011988	A	20000225	KR 1999-30510	1999 0727
US 6291130	B1	20010918	US 1999-361568	1999 0727
US 6517991	B1	20030211	US 2000-606681	2000 0630
US 2003044718	A1	20030306	US 2002-176067	2002 0621



US 2004161697	A2	20040819		
US 6818377	B2	20041116		
PRIORITY APPLN. INFO.:			JP 1998-263392	A
				1998 0917
			JP 1999-6662	A
				1999 0113
			JP 1998-211137	A
				1998 0727
			JP 1999-186809	A
				1999 0630
			US 1999-361568	A3
				1999 0727
			US 2000-606681	A3
				2000 0630

GI



AB The composition contains a compound discharging acids under active ray or

radiation irradiation and a polymer whose solubility in alkaline developer is

enhanced because of decomposition of the polymer by the resulting acids. The polymer involves carboxyl-protecting alc. units I, II, and/or III [R1, R2 = H, (substituted) linear, branched, or cyclic alkyl; R1 and R2 may form single or polycyclic group which may

contain O, S, N, ketone, ester, imide, or amide group; R3-R5 = H, (substituted) linear, branched, cyclic alkyl, alkoxy; 2 of R3-R5 may form single or polycyclic group as above; X = single bond, divalent group; X and R1 and/or R2 may form single or polycyclic group; Y = O, S, NH, N(OH), NR; R = alkyl; n = 1-3]. The far-UV-sensitive photoresist composition is suitable for semiconductor device fabrication, etc.

IT **297156-37-7P**

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)

(far UV-sensitive photoresist **composition** containing protected carboxy-substituted polymer)

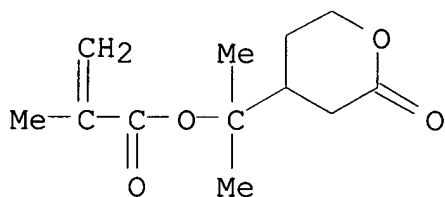
RN 297156-37-7 HCAPLUS

CN 2-Butenedioic acid, mono[[1,2,3,4,4a,4b,5,6,10,10a-decahydro-1,4a-dimethyl-7-(1-methylethyl)-1-phenanthrenyl]methyl] ester, polymer with 1-methyl-1-(tetrahydro-2-oxo-2H-pyran-4-yl)ethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 297156-36-6

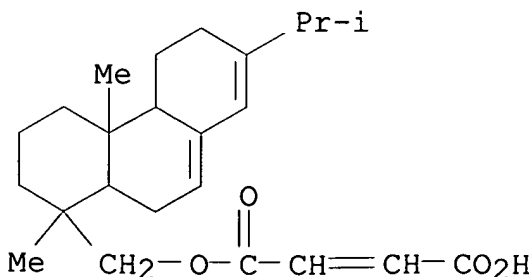
CMF C12 H18 O4



CM 2

CRN 213470-10-1

CMF C24 H34 O4



IC ICM G03F007-039  
 ICS H01L021-027; C08F020-26  
 CC 74-5 (Radiation Chemistry, Photochemistry, and  
**Photographic** and Other Reprographic Processes)  
 Section cross-reference(s): 76  
 IT 280566-60-1P 288303-55-9P 297156-25-3P 297156-27-5P  
 297156-28-6P 297156-30-0P 297156-33-3P 297156-35-5P  
**297156-37-7P** 297156-39-9P 297156-40-2P 297156-42-4P  
 297156-44-6P 297156-46-8P 297156-48-0P 297156-51-5P  
 297156-52-6P 297156-53-7P 297156-55-9P 297156-57-1P  
 297156-58-2P 297156-59-3P  
 RL: IMF (Industrial manufacture); TEM (Technical or engineered  
 material use); **PREP (Preparation)**; USES (Uses)  
 (far UV-sensitive photoresist **composition** containing protected  
 carboxy-substituted polymer)

L25 ANSWER 28 OF 54 HCAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 2000:638244 HCAPLUS  
 DOCUMENT NUMBER: 133:245092  
 TITLE: Radiation-sensitive resin composition  
 INVENTOR(S): Nakano, Takanori; Sugiura, Makoto; Endo,  
 Masayuki  
 PATENT ASSIGNEE(S): JSR Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 10 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	
JP 2000250208	A2	20000914	JP 1999-55879	1999 0303

PRIORITY APPLN. INFO.: JP 1999-55879  
 1999  
 0303

AB The radiation-sensitive resin composition comprises (1) (a) an  
 unsatd. carboxylic acid and/or a unsatd. carboxylic anhydride, (b)  
 an epoxy-containing unsatd. compound, and (c) an olefinic unsatd.  
 compound  
 copolymer made from compds. other than (a) and (b), (2)  
 1,2-quinonediazide compound, and (3) a carboxylic acid with the mol.  
 weight  $\leq 1,000$ . This resin composition is used for the formation of

an interlayer insulating film for a LCD, an IC, and a CCD.

IT **293320-68-0P**, Diethylene glycol dimethyl ether-methacrylic acid- $\beta$ -methylglycidyl methacrylate-styrene-tricyclo[5.2.1.0<sup>2,6</sup>]decan-8-yl methacrylate-p-vinylbenzylglycidyl ether copolymer

RL: RCT (Reactant); SPN (Synthetic preparation); **PREP (Preparation)**; RACT (Reactant or reagent)  
(radiation-sensitive resin **composition** from)

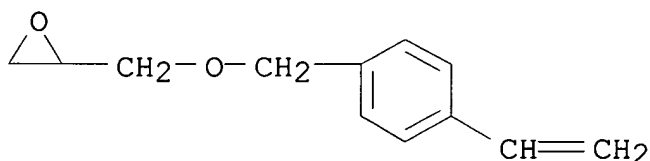
RN 293320-68-0 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, polymer with ethenylbenzene, [[(4-ethenylphenyl)methoxy]methyl]oxirane, (2-methyloxiranyl)methyl 2-methyl-2-propenoate, octahydro-4,7-methano-1H-inden-5-yl 2-methyl-2-propenoate and 1,1'-oxybis[2-methoxyethane] (9CI) (CA INDEX NAME)

CM 1

CRN 113538-80-0

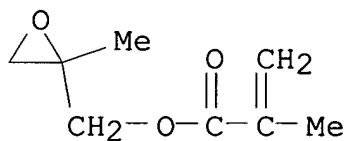
CMF C12 H14 O2



CM 2

CRN 41768-20-1

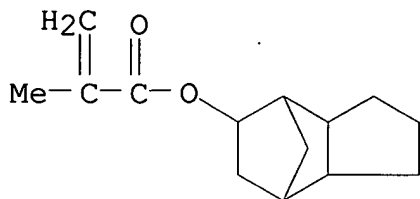
CMF C8 H12 O3



CM 3

CRN 34759-34-7

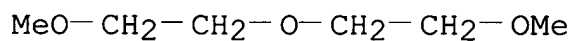
CMF C14 H20 O2



CM 4

CRN 111-96-6

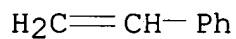
CMF C6 H14 O3



CM 5

CRN 100-42-5

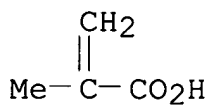
CMF C8 H8



CM 6

CRN 79-41-4

CMF C4 H6 O2



IT **293320-67-9P**, Diethylene glycol dimethyl ether-methacrylic acid-styrene-p-vinylbenzyl glycidyl ether copolymer  
 RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)  
 (radiation-sensitive resin **composition** from)

RN 293320-67-9 HCAPLUS

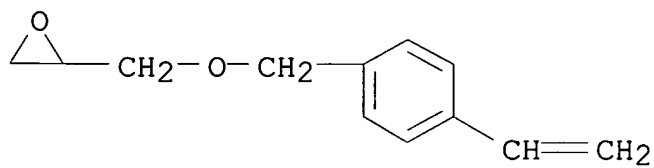
CN 2-Propenoic acid, 2-methyl-, polymer with ethenylbenzene, [[(4-ethenylphenyl)methoxy]methyl]oxirane and 1,1'-oxybis[2-

methoxyethane] (9CI) (CA INDEX NAME)

CM 1

CRN 113538-80-0

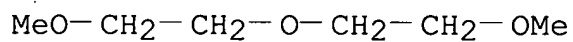
CMF C12 H14 O2



CM 2

CRN 111-96-6

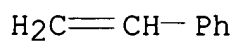
CMF C6 H14 O3



CM 3

CRN 100-42-5

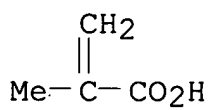
CMF C8 H8



CM 4

CRN 79-41-4

CMF C4 H6 O2



IC ICM G03F007-022

ICS C08F290-00; G03F007-027; G03F007-032  
 CC 74-5 (Radiation Chemistry, Photochemistry, and  
**Photographic** and Other Reprographic Processes)  
 Section cross-reference(s): 35, 38  
 IT **293320-68-0P**, Diethylene glycol dimethyl ether-methacrylic  
 acid- $\beta$ -methylglycidyl methacrylate-styrene-  
 tricyclo[5.2.1.0<sup>2,6</sup>]decan-8-yl methacrylate-p-vinylbenzylglycidyl  
 ether copolymer  
 RL: RCT (Reactant); SPN (Synthetic preparation); **PREP**  
**(Preparation)**; RACT (Reactant or reagent)  
 (radiation-sensitive resin **composition** from)  
 IT 142541-99-9P **293320-67-9P**, Diethylene glycol dimethyl  
 ether-methacrylic acid-styrene-p-vinylbenzyl glycidyl ether  
 copolymer 293320-69-1P, 1,1,3-Tris(2,5-dimethyl-4-hydroxyphenyl)-  
 3-phenylpropane-1,2-naphthoquinonediazide-4-sulfonate  
 RL: SPN (Synthetic preparation); TEM (Technical or engineered  
 material use); **PREP (Preparation)**; USES (Uses)  
 (radiation-sensitive resin **composition** from)

L25 ANSWER 29 OF 54 HCAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 2000:278182 HCAPLUS  
 DOCUMENT NUMBER: 132:300957  
 TITLE: Radiation-sensitive resin composition having  
 methylolbisphenol based polymer  
 INVENTOR(S): Kobayashi, Satoshi; Itoh, Haruhiko  
 PATENT ASSIGNEE(S): Clariant International Ltd., Switz.  
 SOURCE: PCT Int. Appl., 18 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	
WO 2000023850	A1	20000427	WO 1999-JP5750	1999 1019
W: CN, KR, US RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
JP 2000122277	A2	20000428	JP 1998-298710	1998 1020
JP 3333139	B2	20021007		
EP 1046955	A1	20001025	EP 1999-947958	1999

1019

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE,  
MC, PT, IE, FI

US 6379862

B1

20020430

US 2000-582010

2000

0620

PRIORITY APPLN. INFO.:

JP 1998-298710

A

1998

1020

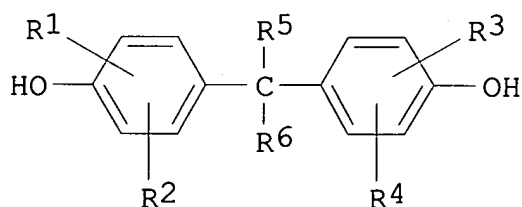
WO 1999-JP5750

W

1999

1019

GI



AB A radiation-sensitive resin composition excellent in heat resistance comprises an alkali-soluble resin prepared by the condensation of a methylolbisphenol compound represented by general formula I ( R1-4 = H, C1-3 alkyl, -CH2OH; R5-6 = H, C1-3 alkyl) either alone or with a phenol, a crosslinking agent and an acid generator. The composition provides the high sensitivity, the high resolution, and the excellent heat-resistance and is suited for use in the semiconductor device and LCD panel production

IT **264913-20-4P**

RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)

(alkali soluble resin for radiation-sensitive resin **compn** .)

RN 264913-20-4 HCAPLUS

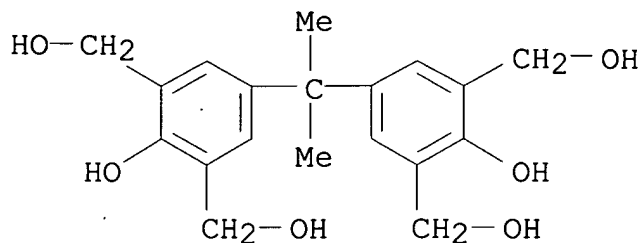
CN Ethanedioic acid, polymer with 5,5'-(1-methylethylidene)bis[2-hydroxy-1,3-benzenedimethanol] and 3-methylphenol (9CI) (CA INDEX NAME)

CM 1

CRN 3957-22-0

CMF C19 H24 O6

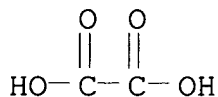




CM 2

CRN 144-62-7

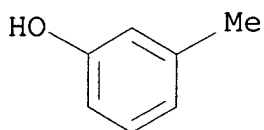
CMF C2 H2 O4



CM 3

CRN 108-39-4

CMF C7 H8 O



IC ICM G03F007-023

ICS G03F007-0384; H01L021-027; C08L061-12; C08G008-24

CC 74-5 (Radiation Chemistry, Photochemistry, and  
**Photographic** and Other Reprographic Processes)IT **264913-20-4P**RL: PNU (Preparation, unclassified); TEM (Technical or engineered  
material use); **PREP (Preparation)**; USES (Uses)(alkali soluble resin for radiation-sensitive resin **compn**

.)

REFERENCE COUNT:

5

THERE ARE 5 CITED REFERENCES AVAILABLE  
FOR THIS RECORD. ALL CITATIONS AVAILABLE  
IN THE RE FORMAT

L25 ANSWER 30 OF 54 HCAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 2000:20344 HCAPLUS  
 DOCUMENT NUMBER: 132:71409  
 TITLE: Fluoropolymer-polyurethane photosensitive  
 compositions for lithographic plates  
 INVENTOR(S): Kawamura, Koichi  
 PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 31 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO. -----	KIND ----	DATE -----	APPLICATION NO. -----	DATE
JP 2000003040	A2	20000107	JP 1998-168669	1998 0616

PRIORITY APPLN. INFO.: JP 1998-168669  
 1998  
 0616

AB The compns. contain polyurethanes (total content of A, B, and C  
 >90%) prepared from (A) fluorinated aliphatic group-containing diols  
 or  
 diisocyanates, (B) X-containing diols or diisocyanates (X =  
 hydrocarbon-containing divalent organic group), and (C)  
 CO<sub>2</sub>H-containing diols  
 or diisocyanates. Lithog. plates obtained from the compns. give  
 hard images without decrease of sensitivity and show stable  
 developability.

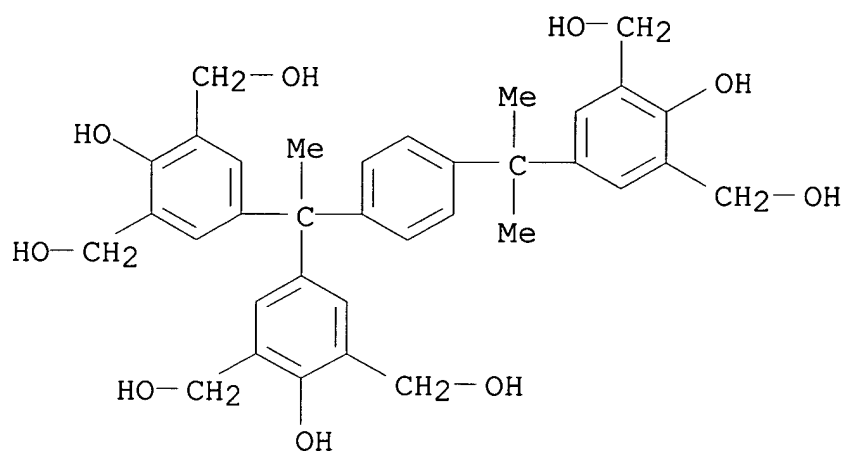
IT **253145-53-8P**  
 RL: DEV (Device component use); IMF (Industrial manufacture);  
**PREP (Preparation)**; USES (Uses)  
 (fluoropolymer-polyurethane photosensitive **compns.**  
 for lithog. plates)

RN 253145-53-8 HCAPLUS  
 CN Benzoic acid, 3,5-dihydroxy-, polymer with 1,2-ethanediol,  
 2,2'-[(3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-  
 heptadecafluorodecyl)imino]bis[ethanol], 5,5'-[1-[4-[1-[4-hydroxy-  
 3,5-bis(hydroxymethyl)phenyl]-1-methylethyl]phenyl]ethylidene]bis[  
 2-hydroxy-1,3-benzenedimethanol] and 5-isocyanato-1-  
 (isocyanatomethyl)-1,3,3-trimethylcyclohexane (9CI) (CA INDEX  
 NAME)

CM 1

CRN 162846-57-3

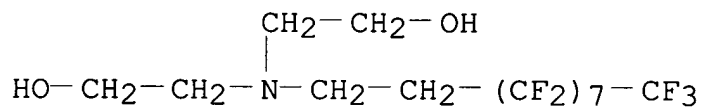
CMF C35 H40 O9



CM 2

CRN 27607-36-9

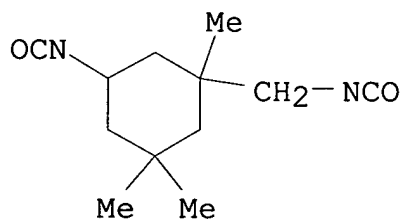
CMF C14 H14 F17 N O2



CM 3

CRN 4098-71-9

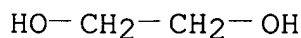
CMF C12 H18 N2 O2



CM 4

CRN 107-21-1

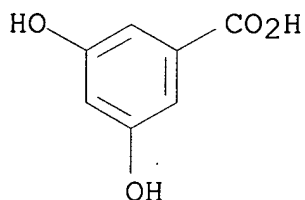
CMF C2 H6 O2



CM 5

CRN 99-10-5

CMF C7 H6 O4



IC ICM G03F007-035

ICS C08G018-38; C08G018-77; G03F007-00

CC 74-6 (Radiation Chemistry, Photochemistry, and  
**Photographic** and Other Reprographic Processes)  
Section cross-reference(s): 38

IT 253145-52-7P **253145-53-8P** 253145-54-9P

RL: DEV (Device component use); IMF (Industrial manufacture);

**PREP (Preparation)**; USES (Uses)

(fluoropolymer-polyurethane photosensitive **comps.**  
for lithog. plates)

L25 ANSWER 31 OF 54 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2000:20343 HCAPLUS

DOCUMENT NUMBER: 132:71408

TITLE: Fluoropolymer-polyurethane photosensitive  
compositions for lithographic plates

INVENTOR(S): Kawamura, Koichi

PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 31 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

## PATENT INFORMATION:

PATENT NO. -----	KIND ----	DATE -----	APPLICATION NO. -----	DATE
JP 2000003032	A2	20000107	JP 1998-165625	1998 0612

PRIORITY APPLN. INFO.:

JP 1998-165625

1998  
0612

AB The compns. contain polyurethanes prepared from (A) fluorinated aliphatic group-containing diols or diisocyanates, (B) C $\geq$ 10 normal or branched alkyl- or alkylene- or C $\geq$ 4 alkyl-substituted aryl-containing diols or diisocyanates, and (C) CO<sub>2</sub>H-containing diols or diisocyanates. Lithog. plates obtained from the compns. give hard images without decrease of sensitivity.

IT **253144-83-1P**

RL: DEV (Device component use); IMF (Industrial manufacture);

**PREP (Preparation); USES (Uses)**(fluoropolymer-polyurethane photosensitive **compns.**  
for lithog. plates)

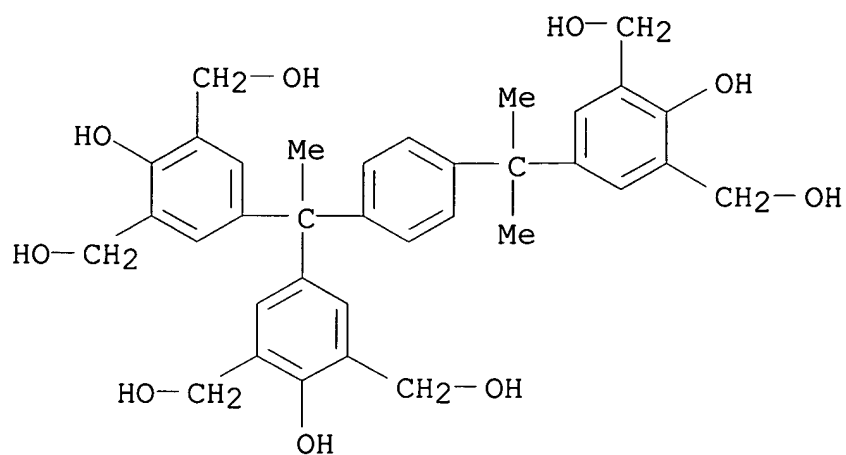
RN 253144-83-1 HCAPLUS

CN Benzoic acid, 3,5-dihydroxy-, polymer with 1,10-decanediol, 2,4-diisocyanato-1-methylbenzene, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-N,N-bis(2-hydroxyethyl)-1-octanesulfonamide and 5,5'-[1-[4-[1-[4-hydroxy-3,5-bis(hydroxymethyl)phenyl]-1-methylethyl]phenyl]ethylidene]bis[2-hydroxy-1,3-benzenedimethanol] (9CI) (CA INDEX NAME)

CM 1

CRN 162846-57-3

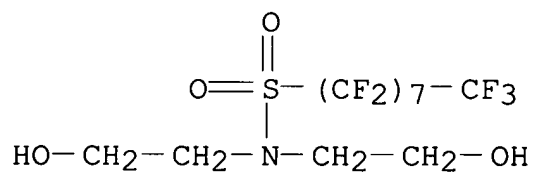
CMF C35 H40 O9



CM 2

CRN 40630-61-3

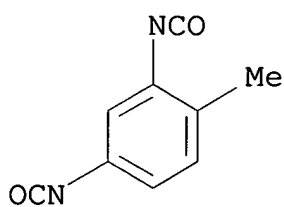
CMF C12 H10 F17 N O4 S



CM 3

CRN 584-84-9

CMF C9 H6 N2 O2



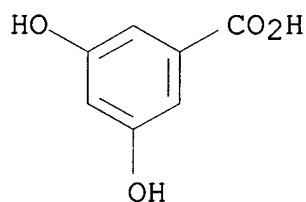
CM 4

CRN 112-47-0  
CMF C10 H22 O2

HO-(CH<sub>2</sub>)<sub>10</sub>-OH

CM 5

CRN 99-10-5  
CMF C7 H6 O4

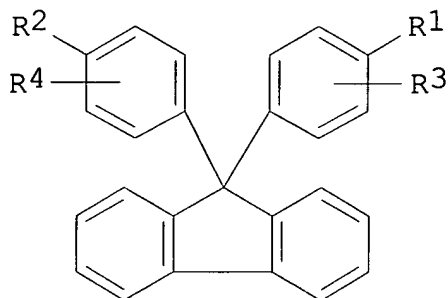


IC ICM G03F007-004  
ICS G03F007-035  
CC 74-6 (Radiation Chemistry, Photochemistry, and  
**Photographic** and Other Reprographic Processes)  
Section cross-reference(s): 38  
IT 253144-81-9P **253144-83-1P** 253144-85-3P  
RL: DEV (Device component use); IMF (Industrial manufacture);  
**PREP (Preparation)**; USES (Uses)  
(fluoropolymer-polyurethane photosensitive **compns.**  
for lithog. plates)

L25 ANSWER 32 OF 54 HCAPLUS COPYRIGHT 2005 ACS on STN  
ACCESSION NUMBER: 1999:610653 HCAPLUS  
DOCUMENT NUMBER: 131:250425  
TITLE: Radiation-sensitive resin composition useful  
as material for forming optical device  
protective coating  
INVENTOR(S): Ogasawara, Akiji; Endo, Masayuki  
PATENT ASSIGNEE(S): JSR Co., Ltd., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 12 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO. -----	KIND ----	DATE -----	APPLICATION NO. -----	DATE
JP 11258792	A2	19990924	JP 1998-59436	1998 0311
PRIORITY APPLN. INFO.:			JP 1998-59436	1998 0311

GI



AB The title resin composition contains (a) a copolymer from unsatd. carboxylic acids and/or their anhydrides, epoxy-containing unsatd. compds., and other olefin-type unsatd. compds., (b) an ethylenic unsatd. bond-containing polymerizable compound I [R1, R2 = O(CH2)2OCOCR5:CH2, OCH2CH(OH)CH2OCOCR5:CH2 or O(CH2)2OCH2CH(OH)CH2OCOCR5:CH2; R3-5 = H, C1-5 hydrocarbon, halo], and (c) a radiation-sensitive polymerization initiator. The composition

provides a coating with high adhesion to substrate, surface hardness, transparency, and thermal resistance and is capable of leveling the surface of a color filter underlying substrate.

IT **173027-33-3P**, Glycidyl methacrylate-methacrylic acid-styrene-p-vinylbenzyl glycidyl ether copolymer  
 RL: DEV (Device component use); PNU (Preparation, unclassified); TEM (Technical or engineered material use); **PREP**  
**(Preparation)**; USES (Uses)

(photoresist **composition** containing olefin-type copolymer and fluorene derivative acrylic compound)

RN 173027-33-3 HCAPLUS

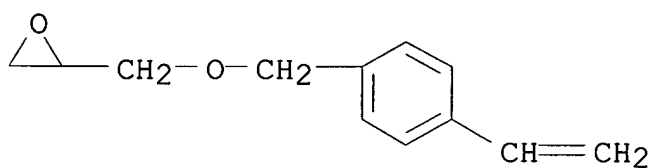
CN 2-Propenoic acid, 2-methyl-, polymer with ethenylbenzene, [[(4-ethenylphenyl)methoxy]methyl]oxirane and oxiranylmethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)



CM 1

CRN 113538-80-0

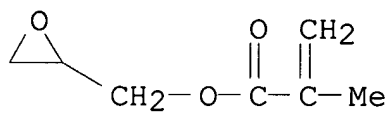
CMF C12 H14 O2



CM 2

CRN 106-91-2

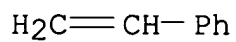
CMF C7 H10 O3



CM 3

CRN 100-42-5

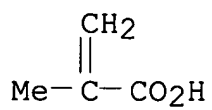
CMF C8 H8



CM 4

CRN 79-41-4

CMF C4 H6 O2



IC ICM G03F007-032

ICS G03F007-027; G03F007-028; G03F007-033  
CC 74-5 (Radiation Chemistry, Photochemistry, and  
**Photographic** and Other Reprographic Processes)  
Section cross-reference(s): 38  
IT 157015-57-1P, Dicyclopentanyl methacrylate-glycidyl  
methacrylate-methacrylic acid-styrene copolymer 157015-60-6P,  
1,3-Butadiene-dicyclopentanyl methacrylate-glycidyl  
methacrylate-methacrylic acid-styrene copolymer  
**173027-33-3P**, Glycidyl methacrylate-methacrylic  
acid-styrene-p-vinylbenzyl glycidyl ether copolymer  
RL: DEV (Device component use); PNU (Preparation, unclassified);  
TEM (Technical or engineered material use); **PREP**  
**(Preparation)**; USES (Uses)  
(photoresist **composition** containing olefin-type copolymer and  
fluorene derivative acrylic compound)

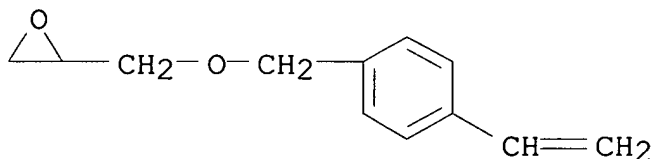
L25 ANSWER 33 OF 54 HCAPLUS COPYRIGHT 2005 ACS on STN  
ACCESSION NUMBER: 1999:412774 HCAPLUS  
DOCUMENT NUMBER: 131:108920  
TITLE: Radiation-sensitive polymer compositions for  
spacers in display panels  
INVENTOR(S): Ogasawara, Shoji; Endo, Masayuki  
PATENT ASSIGNEE(S): JSR Co., Ltd., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 12 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	
JP 11174673	A2	19990702	JP 1997-348354	1997 1217

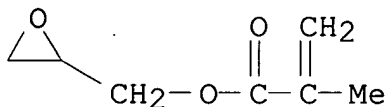
PRIORITY APPLN. INFO.: JP 1997-348354  
1997  
1217

AB The composition comprises (A) copolymer of (a1) unsatd. carboxylic  
acid  
and/or unsatd. carboxylic acid anhydride, (a2) epoxy-containing  
unsatd. compound, and (a3) olefinic unsatd. compound other than a1 and  
a2 and (B) 1,2-quinonediazide compds. The compns. are especially  
useful  
for formation of spacers in touch panels and liquid crystal display  
panels.

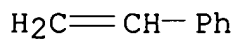
IT **173027-33-3P**, Glycidyl methacrylate-methacrylic acid-styrene-p-vinylbenzyl glycidyl ether copolymer  
 RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)  
 (photosensitive epoxy acrylic polymer-quinonediazide **compns.** for formation of spacers in display panels)  
 RN 173027-33-3 HCAPLUS  
 CN 2-Propenoic acid, 2-methyl-, polymer with ethenylbenzene, [[(4-ethenylphenyl)methoxy]methyl]oxirane and oxiranylmethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)  
 CM 1  
 CRN 113538-80-0  
 CMF C12 H14 O2



CM 2  
 CRN 106-91-2  
 CMF C7 H10 O3

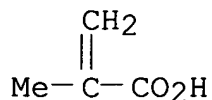


CM 3  
 CRN 100-42-5  
 CMF C8 H8



CM 4

CRN 79-41-4  
CMF C4 H6 O2



IC ICM G03F007-027  
ICS G03F007-027; C08G059-40; G02F001-1339; G03F007-022  
CC 74-4 (Radiation Chemistry, Photochemistry, and  
**Photographic** and Other Reprographic Processes)  
Section cross-reference(s): 38  
IT 58353-15-4P, Glycidyl methacrylate-methacrylic acid-styrene  
copolymer 157015-57-1P, Dicyclopentanyl methacrylate-glycidyl  
methacrylate-methacrylic acid-styrene copolymer 157015-60-6P,  
1,3-Butadiene-dicyclopentanyl methacrylate-glycidyl  
methacrylate-methacrylic acid-styrene copolymer  
**173027-33-3P**, Glycidyl methacrylate-methacrylic  
acid-styrene-p-vinylbenzyl glycidyl ether copolymer  
RL: PNU (Preparation, unclassified); TEM (Technical or engineered  
material use); **PREP (Preparation)**; USES (Uses)  
(photosensitive epoxy acrylic polymer-quinonediazide  
**compns.** for formation of spacers in display panels)

L25 ANSWER 34 OF 54 HCAPLUS COPYRIGHT 2005 ACS on STN  
ACCESSION NUMBER: 1999:341005 HCAPLUS  
DOCUMENT NUMBER: 131:37787  
TITLE: Deep-ultraviolet-sensitive polymer composition  
for photoresist  
INVENTOR(S): Nakano, Takanori; Sugiura, Makoto; Endo,  
Masayuki  
PATENT ASSIGNEE(S): JSR Co., Ltd., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	
JP 11143072	A2	19990528	JP 1997-304601	1997 1106

PRIORITY APPLN. INFO.:

JP 1997-304601

1997

1106

AB The title composition contains [A] a copolymer of (1) an unsatd. carboxylic acid and (2) a radial-polymerizable compound containing epoxy group, and optionally (3) a radial-polymerizable compound [other than (2)] which is polymerizable with (1) and (2) and [B] an adhesion-assisting agent. The composition has high sensitivity and forms a pos.-working photoresist having high transparency, developability, and interlayer adhesion.

IT **173027-33-3P**, Glycidyl methacrylate-methacrylic acid-styrene-p-vinylbenzyl glycidyl ether copolymer  
**191328-50-4P**, Dicyclopentanyl methacrylate-glycidyl methacrylate-methacrylic acid-styrene-p-vinylbenzyl glycidyl ether copolymer

RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)

(deep-UV-sensitive polymer **composition** containing polyacrylate and adhesion-assisting agent for transparent photoresist)

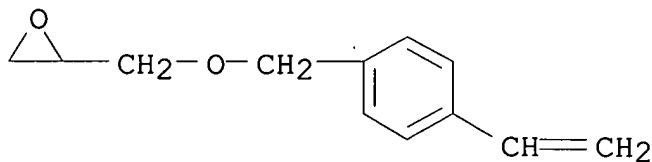
RN 173027-33-3 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, polymer with ethenylbenzene, [[(4-ethenylphenyl)methoxy]methyl]oxirane and oxiranylmethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 113538-80-0

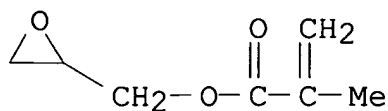
CMF C12 H14 O2



CM 2

CRN 106-91-2

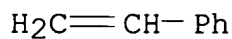
CMF C7 H10 O3



CM 3

CRN 100-42-5

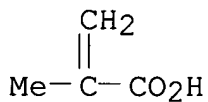
CMF C8 H8



CM 4

CRN 79-41-4

CMF C4 H6 O2



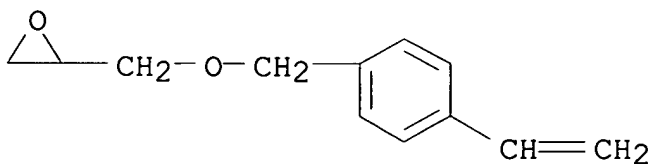
RN 191328-50-4 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, polymer with ethenylbenzene,  
 [[(4-ethenylphenyl)methoxy]methyl]oxirane, octahydro-4,7-methano-  
 1H-inden-5-yl 2-methyl-2-propenoate and oxiranylmethyl  
 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 113538-80-0

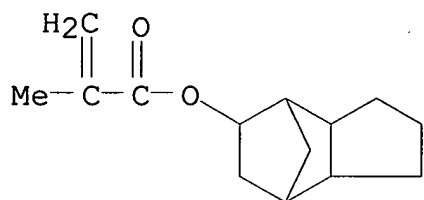
CMF C12 H14 O2



CM 2

CRN 34759-34-7

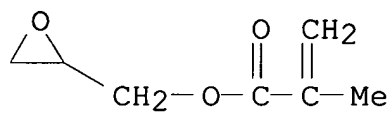
CMF C14 H20 O2



CM 3

CRN 106-91-2

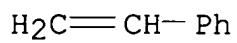
CMF C7 H10 O3



CM 4

CRN 100-42-5

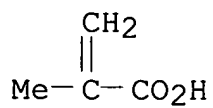
CMF C8 H8



CM 5

CRN 79-41-4

CMF C4 H6 O2



IC ICM G03F007-038  
ICS G03F007-038; C08F002-48; G03F007-027; G03F007-085; C09D004-00  
CC 74-5 (Radiation Chemistry, Photochemistry, and  
**Photographic** and Other Reprographic Processes)  
Section cross-reference(s): 38  
IT **173027-33-3P**, Glycidyl methacrylate-methacrylic  
acid-styrene-p-vinylbenzyl glycidyl ether copolymer  
**191328-50-4P**, Dicyclopentanyl methacrylate-glycidyl  
methacrylate-methacrylic acid-styrene-p-vinylbenzyl glycidyl ether  
copolymer 221675-61-2P, Acrylic acid-butadiene-dicyclopentanyl  
methacrylate-glycidyl methacrylate copolymer 227002-06-4P  
227002-07-5P  
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical  
or engineered material use); **PREP (Preparation)**; USES  
(Uses)  
(deep-UV-sensitive polymer **composition** containing polyacrylate  
and adhesion-assisting agent for transparent photoresist)

L25 ANSWER 35 OF 54 HCAPLUS COPYRIGHT 2005 ACS on STN  
ACCESSION NUMBER: 1999:322533 HCAPLUS  
DOCUMENT NUMBER: 131:25828  
TITLE: Radiation-sensitive resin composition for  
display panel spacer  
INVENTOR(S): Ogasawara, Akiiji; Nakano, Takanori; Endo,  
Masayuki  
PATENT ASSIGNEE(S): JSR Co., Ltd., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 12 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 11133600	A2	19990521	JP 1997-298329	1997 1030

PRIORITY APPLN. INFO.: JP 1997-298329  
1997  
1030

AB The composition contains (A) a copolymer manufactured from an unsatd.  
carboxylic acid and/or its anhydride, an epoxy-containing unsatd.  
compound, and an olefin-based unsatd. compound, (B) an ethylenic  
unsatd. bond-containing polymerizable compound, and (C) a  
radiation-sensitive polymerization initiator. The spacer shows  
excellent



rubbing resistance, good mech. strength, and heat and dimension stability. The spacer is useful for a liquid crystal panel, a touch sensor panel, etc.

IT **173027-33-3P**, Glycidyl methacrylate-methacrylic acid-styrene-p-vinylbenzyl glycidyl ether copolymer  
 RL: DEV (Device component use); IMF (Industrial manufacture); TEM (Technical or engineered material use); **PREP (Preparation)**  
 ; USES (Uses)

(radiation-sensitive resin **composition** for display panel spacer)

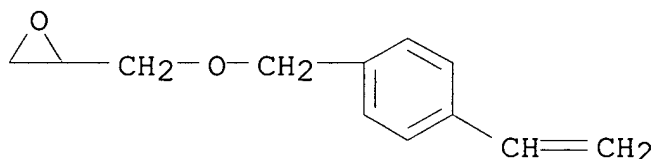
RN 173027-33-3 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, polymer with ethenylbenzene, [[(4-ethenylphenyl)methoxy]methyl]oxirane and oxiranylmethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 113538-80-0

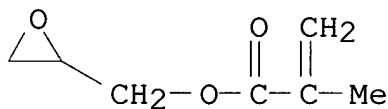
CMF C12 H14 O2



CM 2

CRN 106-91-2

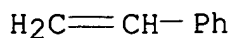
CMF C7 H10 O3



CM 3

CRN 100-42-5

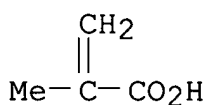
CMF C8 H8



CM 4

CRN 79-41-4

CMF C4 H6 O2



IC ICM G03F007-033  
ICS G02F001-1339; G03F007-004; G03F007-027  
CC 74-12 (Radiation Chemistry, Photochemistry, and  
**Photographic** and Other Reprographic Processes)  
Section cross-reference(s): 38  
IT 28851-59-4P, tert-Butyl methacrylate-glycidyl methacrylate-  
methacrylic acid copolymer 32106-00-6P 58353-15-4P, Glycidyl  
methacrylate-methacrylic acid-styrene copolymer 157015-57-1P  
**173027-33-3P**, Glycidyl methacrylate-methacrylic  
acid-styrene-p-vinylbenzyl glycidyl ether copolymer  
RL: DEV (Device component use); IMF (Industrial manufacture); TEM  
(Technical or engineered material use); **PREP (Preparation)**  
; USES (Uses)  
(radiation-sensitive resin **composition** for display panel  
spacer)

L25 ANSWER 36 OF 54 HCAPLUS COPYRIGHT 2005 ACS on STN  
ACCESSION NUMBER: 1999:238787 HCAPLUS  
DOCUMENT NUMBER: 130:318625  
TITLE: Negatively-working photosensitive recording  
material useful for lithographic plate  
INVENTOR(S): Kunia, Kazuto  
PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 44 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 11102071

A2

19990413

JP 1997-262236

1997

0926

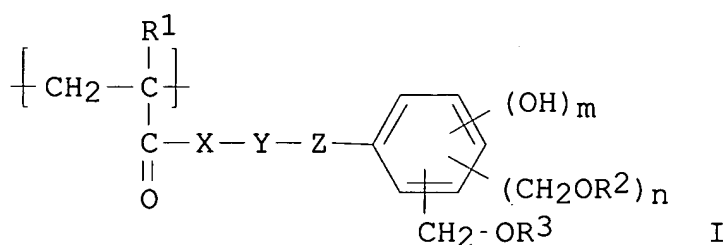
PRIORITY APPLN. INFO.:

JP 1997-262236

1997

0926

GI



AB The title material contains an IR absorbent and a polymer having a structural unit I [R<sup>1</sup> = H, Me; R<sup>2</sup>, R<sup>3</sup> = H, C<sub>≤16</sub> hydrocarbon which may contain O as linkage; X = O, S, NR<sub>4</sub>; Y = single bond, C<sub>≤16</sub> divalent linking group which may be linked by O; Z = single bond, O, S, CH<sub>2</sub>, NR<sub>5</sub>, CO, SO<sub>2</sub>, divalent linking group composed of ≥2 of these atoms and groups; R<sub>4</sub>, R<sub>5</sub> = C<sub>≤16</sub> hydrocarbyl; m = 0-3; n = 1-3, 1 ≤ m + n ≤ 5]. Direct platemaking from digital data using IR ray lasers is possible for the material and the resulting lithog. plate shows high photosensitivity, printing durability, and storage stability.

IT **223584-67-6P 223584-69-8P 223584-71-2P**RL: IMF (Industrial manufacture); RCT (Reactant); **PREP****(Preparation)**; RACT (Reactant or reagent)(pos.-working photosensitive polymer **composition** for direct platemaking using IR laser for lithog. plate)

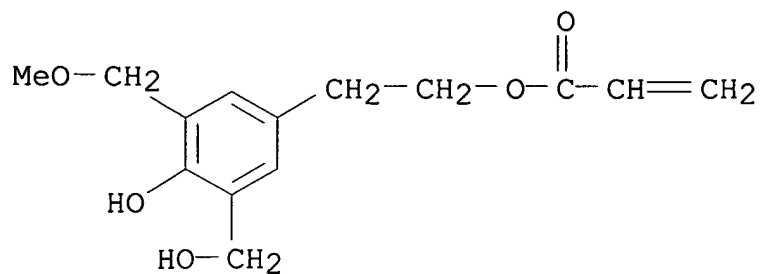
RN 223584-67-6 HCAPLUS

CN 2-Propenoic acid, 2-[4-hydroxy-3-(hydroxymethyl)-5-(methoxymethyl)phenyl]ethyl ester, polymer with N-[(4-methylphenyl)sulfonyl]-2-propenamide (9CI) (CA INDEX NAME)

CM 1

CRN 223584-66-5

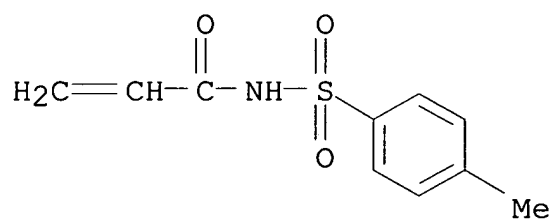
CMF C14 H18 O5



CM 2

CRN 131290-90-9

CMF C10 H11 N O3 S



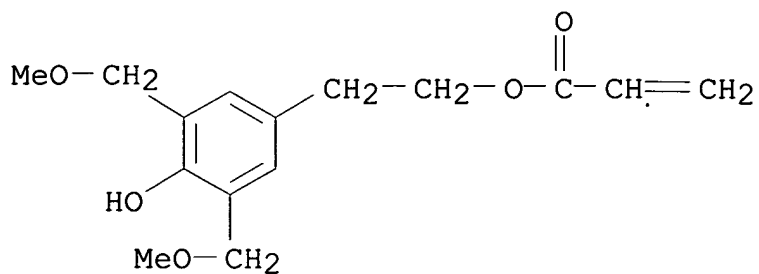
RN 223584-69-8 HCAPLUS

CN 2-Propenoic acid, 2-[4-hydroxy-3,5-bis(hydroxymethyl)phenyl]ethyl ester, polymer with 2-[4-hydroxy-3,5-bis(methoxymethyl)phenyl]ethyl 2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 223584-68-7

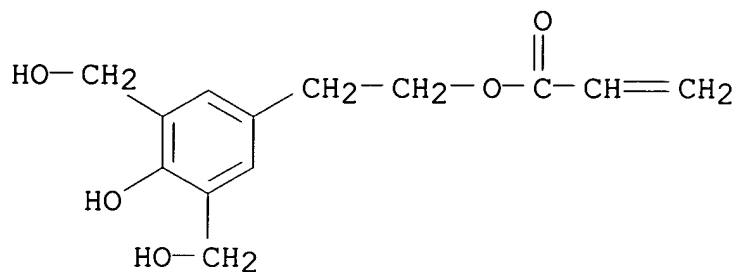
CMF C15 H20 O5



CM 2

CRN 223558-12-1

CMF C13 H16 O5



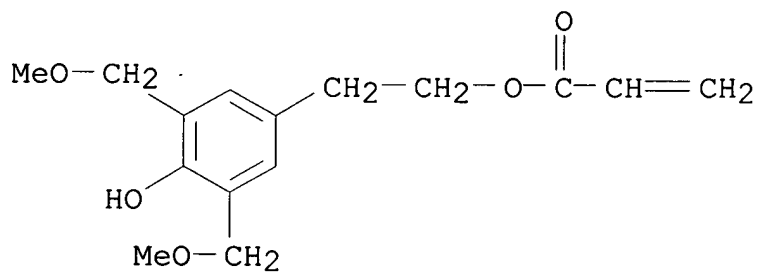
RN 223584-71-2 HCAPLUS

CN 2-Propenoic acid, 2-[4-hydroxy-3,5-bis(methoxymethyl)phenyl]ethyl ester, polymer with methyl 2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 223584-68-7

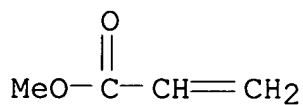
CMF C15 H20 O5



CM 2

CRN 96-33-3

CMF C4 H6 O2



IC ICM G03F007-038

ICS G03F007-00; G03F007-004  
 CC 74-6 (Radiation Chemistry, Photochemistry, and  
**Photographic** and Other Reprographic Processes)  
 IT **223584-67-6P 223584-69-8P 223584-71-2P**  
 RL: IMF (Industrial manufacture); RCT (Reactant); **PREP**  
**(Preparation)**; RACT (Reactant or reagent)  
 (pos.-working photosensitive polymer **composition** for  
 direct platemaking using IR laser for lithog. plate)

L25 ANSWER 37 OF 54 HCAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 1999:61184 HCAPLUS  
 DOCUMENT NUMBER: 130:125833  
 TITLE: High-temperature crosslinkable liquid  
 crystalline polyester compositions  
 INVENTOR(S): Pithart, Cornealia; Frings, Rainer Bruno;  
 Haraguchi, Kazutoshi; Grahe, Gerwald  
 PATENT ASSIGNEE(S): Dainippon Ink and Chemicals, Inc., Japan  
 SOURCE: Eur. Pat. Appl., 13 pp.  
 CODEN: EPXXDW  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO. -----	KIND ----	DATE -----	APPLICATION NO. -----	DATE
EP 890615	A1	19990113	EP 1997-111746	1997 0710
EP 890615	B1	20000503		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
JP 11092647	A2	19990406	JP 1998-163407	1998 0611
PRIORITY APPLN. INFO.:			EP 1997-111746	A 1997 0710

AB The title mixts. comprise self-crosslinking, liquid crystalline polyesters, which have terephthalic units having lateral propargyloxy groups, and based on 2,5-bis(propargyloxy)terephthalic acid and 4,4'-dihydroxybiphenyl, and a co-crosslinking agent component, for crosslinking in the liquid crystalline phase at above their m.p. Thus, bis(4-maleimidophenyl)methane was mixed with liquid crystalline 2,5-bis(propargyloxy)terephthalic acid dichloride-2,5-

bis(pentyloxy)terephthalic acid dichloride-4,4'-dihydroxybiphenyl-1,5-dihydroxynaphthalene copolymer and heated to 220° for 1 h.

IT **219818-10-7P 219818-14-1P**

RL: IMF (Industrial manufacture); **PREP (Preparation)**

(high-temperature crosslinkable liquid crystalline polyester **compns** . with nematic texture retained in the cured state)

RN 219818-10-7 HCAPLUS

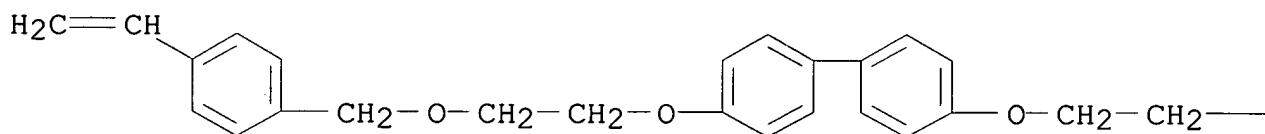
CN 1,4-Benzenedicarbonyl dichloride, 2,5-bis(pentyloxy)-, polymer with [1,1'-biphenyl]-4,4'-diol, 4,4'-bis[2-[(4-ethenylphenyl)methoxy]ethoxy]-1,1'-biphenyl, 2,5-bis(2-propynyloxy)-1,4-benzenedicarbonyl dichloride and 1,5-naphthalenediol (9CI) (CA INDEX NAME)

CM 1

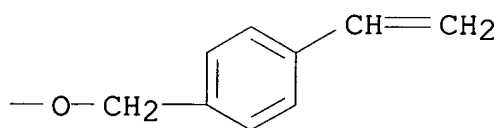
CRN 219818-09-4

CMF C34 H34 O4

PAGE 1-A



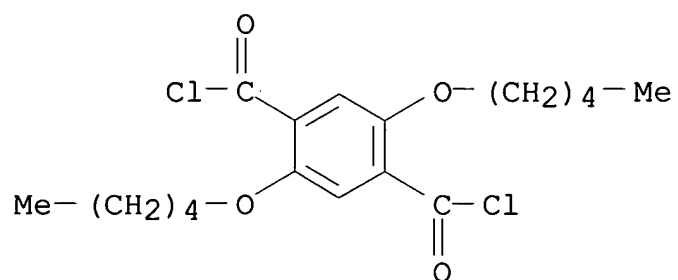
PAGE 1-B



CM 2

CRN 128481-85-6

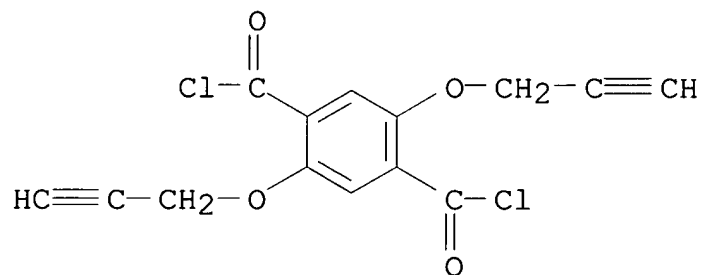
CMF C18 H24 C12 O4



CM 3

CRN 84119-09-5

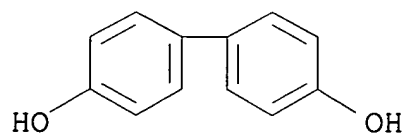
CMF C14 H8 Cl2 O4



CM 4

CRN 92-88-6

CMF C12 H10 O2

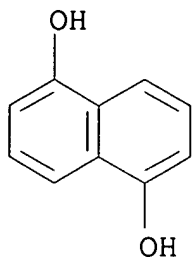


CM 5

CRN 83-56-7

CMF C10 H8 O2





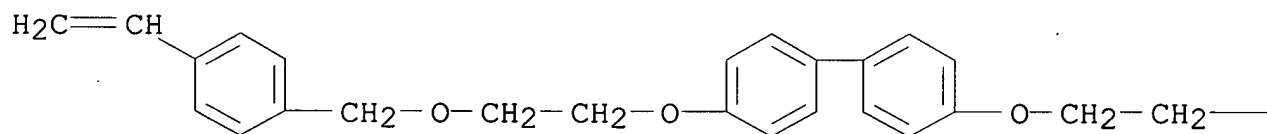
RN 219818-14-1 HCAPLUS  
 CN 1,4-Benzenedicarbonyl dichloride, 2,5-bis(pentyloxy)-, polymer  
 with [1,1'-biphenyl]-4,4'-diol, 4,4'-bis[2-[(4-  
 ethenylphenyl)methoxy]ethoxy]-1,1'-biphenyl, 2,5-bis(2-  
 propynyloxy)-1,4-benzenedicarbonyl dichloride and  
 2,6-naphthalenediol (9CI) (CA INDEX NAME)

CM 1

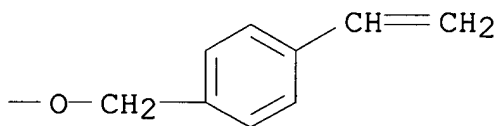
CRN 219818-09-4

CMF C34 H34 O4

PAGE 1-A



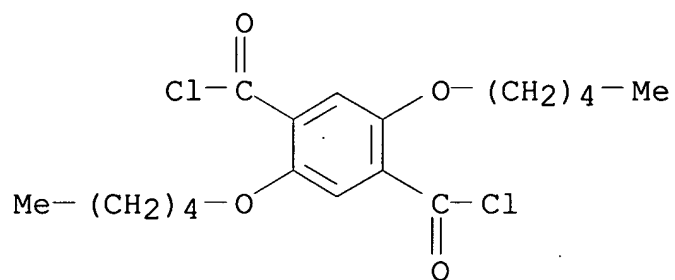
PAGE 1-B



CM 2

CRN 128481-85-6

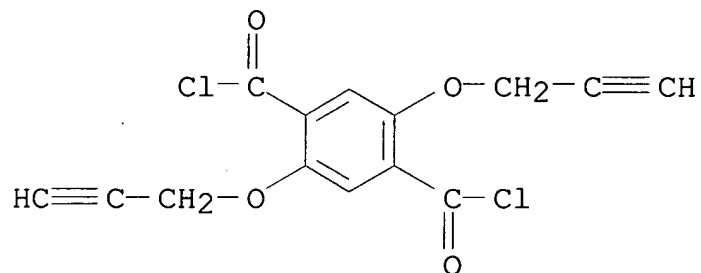
CMF C18 H24 C12 O4



CM 3

CRN 84119-09-5

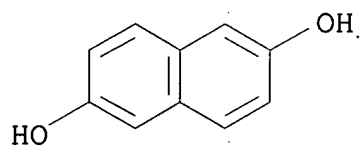
CMF C14 H8 Cl2 O4



CM 4

CRN 581-43-1

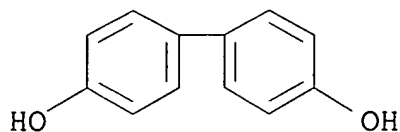
CMF C10 H8 O2



CM 5

CRN 92-88-6

CMF C12 H10 O2



IC ICM C08L067-06  
 ICS C08G063-54; C08G063-676; C09K019-38  
 CC 37-3 (Plastics Manufacture and Processing)  
 Section cross-reference(s): 75  
 IT 219818-07-2P 219818-08-3P **219818-10-7P** 219818-11-8P  
 219818-12-9P 219818-13-0P **219818-14-1P** 219818-15-2P  
 219818-16-3P  
 RL: IMF (Industrial manufacture); **PREP (Preparation)**  
 (high-temperature crosslinkable liquid crystalline polyester **compns**  
 . with nematic texture retained in the cured state)  
 REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE  
 FOR THIS RECORD. ALL CITATIONS AVAILABLE  
 IN THE RE FORMAT

L25 ANSWER 38 OF 54 HCAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 1998:712707 HCAPLUS  
 DOCUMENT NUMBER: 130:31173  
 TITLE: Curable and alkali-soluble polymer  
 compositions  
 INVENTOR(S): Akutsu, Mitsuo; Tominaga, Nobuhide; Saito,  
 Seiichi  
 PATENT ASSIGNEE(S): Asahi Denka Kogyo K. K., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 12 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 10292083	A2	19981104	JP 1997-102200	1997 0418

PRIORITY APPLN. INFO.: JP 1997-102200  
 1997  
 0418

AB Title compns. with good heat resistance and low dielec. constant,  
 useful for printed circuits, etc., comprise (A) copolymers having  
 5-95% 2,5-pyrrolidinedione-3,4-diyl unit, which has substituents

R1 at 3-position and R2X1 at 1-position, 5-95% CR3[C6H4(CH2OC6H4)nX2]CH2 unit, and 0-50% CR4X3CH2 unit [R1, R3, R4 = H, Me; R2 = C1-18 alkylene, cycloalkylene, arylene; X1, X2 = H, C1-4 alkyl, CO2H; X3 = CO2H, CONR5R6, CO2R7, where one of X1-3 is CO2H; R5, R6 = H, C1-8 alkyl; R7 = C1-4 alkyl; n = 0, 1], (B) compds. containing  $\geq 2$  oxazoline rings, and (C) polybutadienes modified with reactive groups. Thus, a composition comprising a copolymer [prepared from 6.86 g N-(p-carboxyphenyl)maleimide and 4.16 g styrene] 20, HO2CCH(CH:CH2)CH2[CH2CH(CH:CH2)]nCH2CH(CH:CH2)CO2H (n = 10-50) 10, 2,2'-(1,3-phenylene)-bis(2-oxazoline) 7.8, dipentaerythritol hexaacrylate 10, 2-[N-(2"-methoxy-1"-methylethoxycarbonylmethyl)-3'-carbazolyl]-4,6-bis(trichloromethyl)-s-triazine 1.9, AIBN 0.5, and cyclohexanone 191 parts was applied on an Al sheet, irradiated with UV, and baked to form a coating showing peel strength 2.5 kg/cm, volume resistivity  $2.0 + 10^6 \Omega\text{-cm}$ , sp. inductive capacity 2.5 (1 MHz), and good developability.

IT **194472-63-4P**

RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use);

**PREP (Preparation); USES (Uses)**

(carboxy-containing maleimide-styrene polymer **compns.** for alkali-soluble elec. insulators)

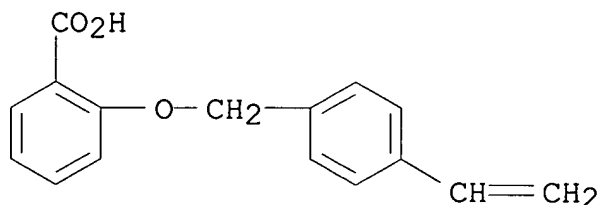
RN 194472-63-4 HCAPLUS

CN Benzoic acid, 2-[(4-ethenylphenyl)methoxy]-, polymer with 1-phenyl-1H-pyrrole-2,5-dione (9CI) (CA INDEX NAME)

CM 1

CRN 194472-62-3

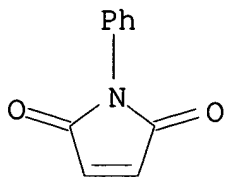
CMF C16 H14 O3



CM 2

CRN 941-69-5

CMF C10 H7 N O2



IC ICM C08L035-00  
 ICS C08K005-103; C08K005-353; C08L025-18; C08L047-00  
 CC 74-5 (Radiation Chemistry, Photochemistry, and  
**Photographic** and Other Reprographic Processes)  
 Section cross-reference(s): 76  
 IT 124489-29-8P, N-(p-Carboxyphenyl)maleimide-styrene copolymer  
**194472-63-4P** 194472-64-5P 194472-65-6P 216447-36-8P  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation);  
 PRP (Properties); TEM (Technical or engineered material use);  
**PREP (Preparation)**; USES (Uses)  
 (carboxy-containing maleimide-styrene polymer **compns.** for  
 alkali-soluble elec. insulators)

L25 ANSWER 39 OF 54 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1998:675502 HCAPLUS

DOCUMENT NUMBER: 129:349086

TITLE: Pentaerythritol tetraacrylate mixture,  
 photopolymerizable composition containing it  
 for lithographic plate and manufacture of the  
 mixture involving recrystallization for  
 purification

INVENTOR(S): Kunita, Kazuhito; Azuma, Tatsuji; Okamoto,  
 Yasuo

PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 51 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO. -----	KIND ----	DATE -----	APPLICATION NO. -----	DATE
JP 10279613	A2	19981020	JP 1997-102751	

1997  
0404

PRIORITY APPLN. INFO.:

JP 1997-102751

1997  
0404

AB The mixture, which is crystalline and powdered at room temperature, contains

≥75 weight% pentaerythritol tetraacrylate and is manufactured by reaction of an acrylic acid derivative  $\text{CH}_2:\text{CHCOX}$  (I; X = OH, OR, Cl, Br, I; R = C1-8 hydrocarbyl) with pentaerythritol (II), followed by recrystn. for purification The composition contains the above purified

mixture as addition-polymerizable ethylenically unsatd. monomers. The composition is manufactured through recrystn. process from reaction products

of I and II. The composition shows high photopolymn. speed and gives a sticking-free cured product to be useful for manufacture of lithog. plates.

IT **215512-64-4P**

RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)

(manufacture of highly purified pentaerythritol tetraacrylate-based photopolymerizable **composition** for lithog. plate by recrystn.)

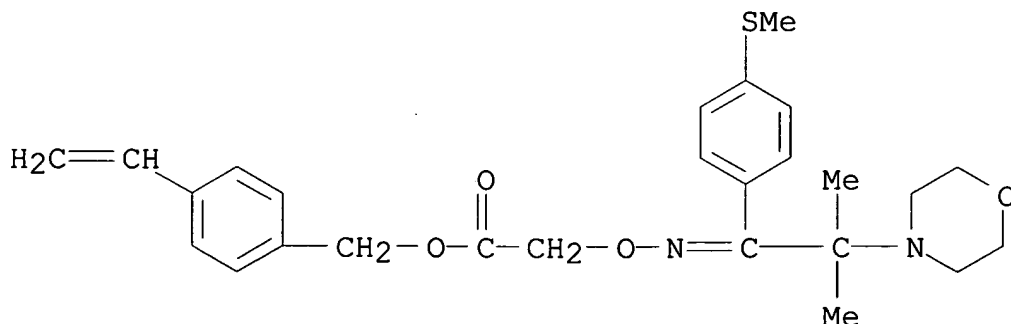
RN 215512-64-4 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, polymer with 2,2-bis[[ (1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl di-2-propenoate, 2-(1,3-dihydro-1-oxo-2H-inden-2-ylidene)-5-(3-heptyl-2(3H)-benzothiazolylidene)-3-(2-propenyl)-4-thiazolidinone, (4-ethenylphenyl)methyl [[[2-methyl-1-[4-(methylthio)phenyl]-2-(4-morpholinyl)propylidene]amino]oxy]acetate, phenylmethyl 2-methyl-2-propenoate and 2-propenyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 212203-57-1

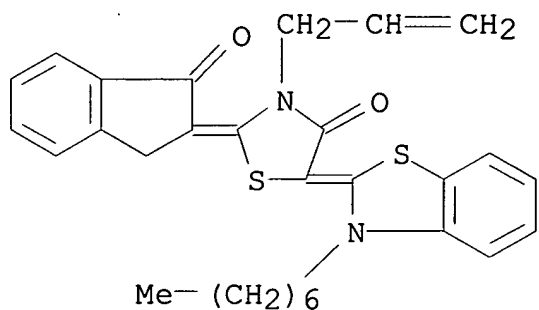
CMF C26 H32 N2 O4 S



CM 2

CRN 178206-58-1

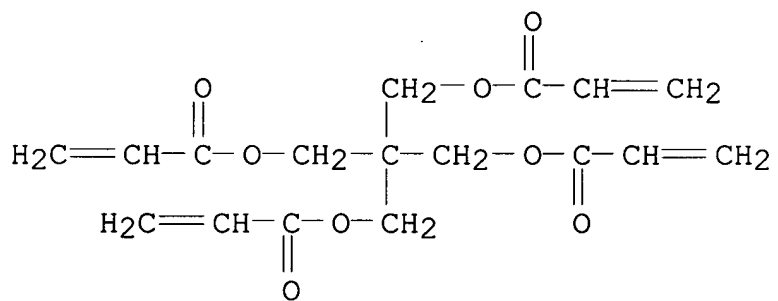
CMF C29 H30 N2 O2 S2



CM 3

CRN 4986-89-4

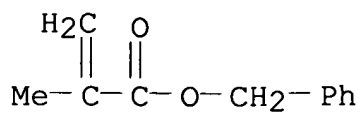
CMF C17 H20 O8



CM 4

CRN 2495-37-6

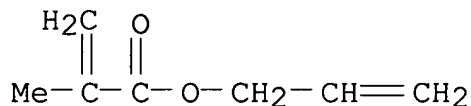
CMF C11 H12 O2



CM 5

CRN 96-05-9

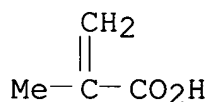
CMF C7 H10 O2



CM 6

CRN 79-41-4

CMF C4 H6 O2



IC ICM C08F002-48

ICS C07C069-54; C08F020-20; C09D004-02; C07B063-00; G03F007-027

CC 74-6 (Radiation Chemistry, Photochemistry, and  
**Photographic** and Other Reprographic Processes)IT 215512-63-3P **215512-64-4P** 215512-65-5PRL: PNU (Preparation, unclassified); TEM (Technical or engineered  
material use); **PREP (Preparation)**; USES (Uses)(manufacture of highly purified pentaerythritol tetraacrylate-based  
photopolymerizable **composition** for lithog. plate by  
recrystn.)

L25 ANSWER 40 OF 54 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1998:580254 HCAPLUS

DOCUMENT NUMBER: 129:267914

TITLE: Positive-working photosensitive composition  
with high sensitivity toward far ultraviolet  
ray

INVENTOR(S): Aogo, Toshiaki; Tan, Shiro; Sato, Kenichiro

PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 39 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 2



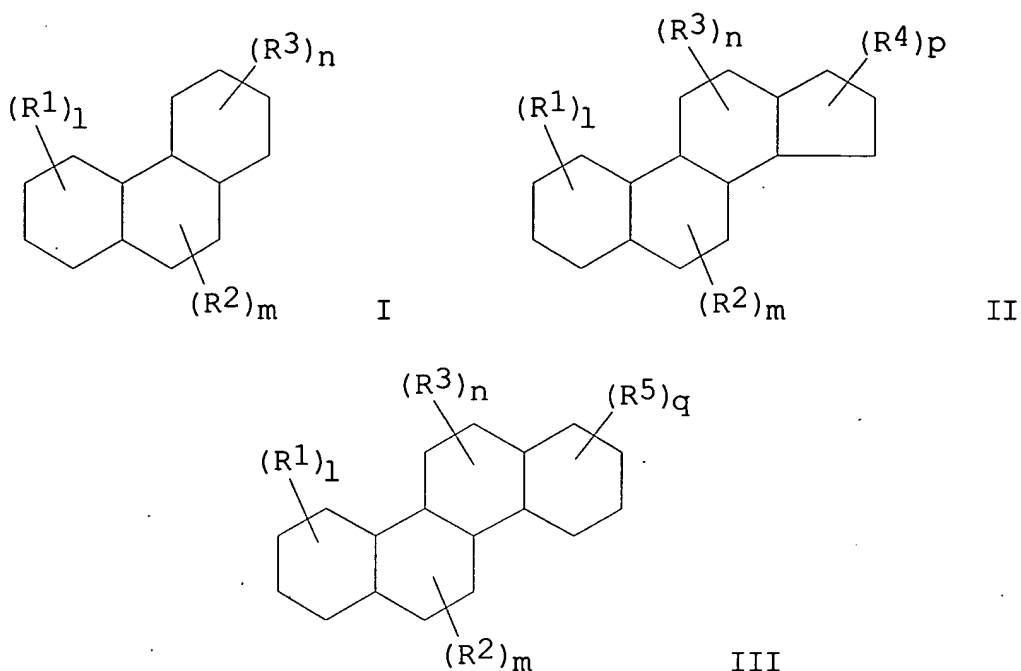
## PATENT INFORMATION:

PATENT NO. -----	KIND ----	DATE -----	APPLICATION NO. -----	DATE
JP 10232495	A2	19980902	JP 1997-33958	1997 0218
US 6042991	A	20000328	US 1998-25451	1998 0218
US 6416925	B1	20020709	US 2000-497281	2000 0202

## PRIORITY APPLN. INFO.:

JP 1997-33958	A	1997 0218
JP 1997-46000	A	1997 0228
US 1998-25451	A3	1998 0218

GI



AB The title composition contains a compound generating acid upon active ray

or radiation irradiation and a resin having  $\geq 1$  monovalent polycyclic alicyclic group of I, II, or III [ $R^1-5$  = alkyl, cycloalkyl, alkenyl, alkynyl (these groups may be substituted), halo, CN,  $R^6OR^7$ ,  $R^8CO_2R^9$ ,  $R^{10}CONR^{11}R^{12}$ ,  $R^{13}OCOR^{14}$ ;  $R^7$ ,  $R^9$  = H, alkyl, cycloalkyl, alkenyl (these groups may be substituted), group that is decomposed by the action of acid to increase the solubility

in alkaline developing solns.;  $R^{11}$ ,  $R^{12}$ ,  $R^{14}$  = H, alkyl, cycloalkyl, alkenyl (these groups may be substituted),  $R^{11}$  and  $R^{12}$  may link to form a ring;  $R^6$ ,  $R^8$ ,  $R^{10}$ ,  $R^{13}$  = single bond, alkylene, alkenylene, cycloalkylene (these groups may be substituted);  $l$ ,  $m$ ,  $n$ ,  $p$ ,  $q$  = 0-5, when  $l$ ,  $m$ ,  $n$ ,  $p$ ,  $q \geq 2$ , the plural groups in each  $R^1-5$  may be different, when 2 groups in each  $R^1-5$  are substituted at the same C atom, they may represent carbonyl or thiocarbonyl group, when 2 groups in each  $R^1-5$  are substituted at adjacent C atoms, they may link to form double bond between these C atoms, when  $\geq 2$  groups in each  $R^1-5$  are substituted, they may link to form a ring; I, II, and III may link to the resin at any position in the polycyclic structures] and a group that is decomposed by the action of acid to increase the solubility in alkaline

developing solns. The composition shows high sensitivity to UV ray of

≤250 nm, especially ≤220 nm and provides high resolution patterns with good profile and dry etch resistance. The composition gives fine patterns and is useful of manufacture of semiconductor devices.

IT **213469-89-7P 213469-90-0P 213470-11-2P**  
**213470-17-8P**

RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)  
 (photoresist **composition** containing acid generator and polymer having alicyclic group)

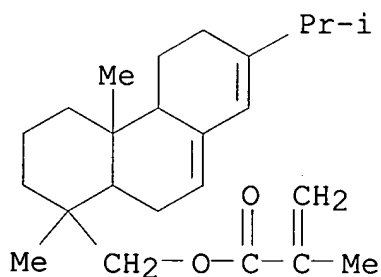
RN 213469-89-7 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, polymer with  
 [1,2,3,4,4a,4b,5,6,10,10a-decahydro-1,4a-dimethyl-7-(1-methylethyl)-1-phenanthrenyl]methyl 2-methyl-2-propenoate and tetrahydro-2H-pyran-2-yl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 212580-13-7

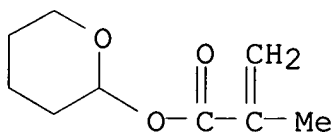
CMF C24 H36 O2



CM 2

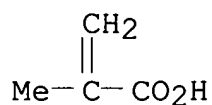
CRN 52858-59-0

CMF C9 H14 O3



CM 3

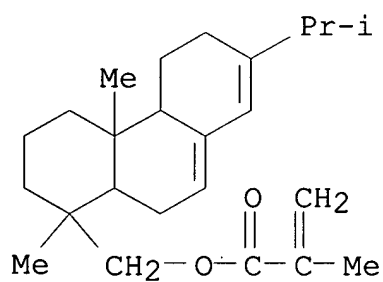
CRN 79-41-4  
CMF C4 H6 O2



RN 213469-90-0 HCAPLUS  
CN 2-Propenoic acid, 2-methyl-, polymer with 1-cyclopropyl-1-methylethyl 2-methyl-2-propenoate and [1,2,3,4,4a,4b,5,6,10,10a-decahydro-1,4a-dimethyl-7-(1-methylethyl)-1-phenanthrenyl]methyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

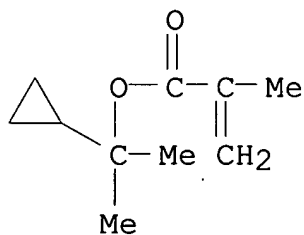
CM 1

CRN 212580-13-7  
CMF C24 H36 O2



CM 2

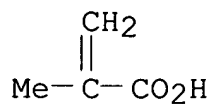
CRN 113686-68-3  
CMF C10 H16 O2



CM 3

CRN 79-41-4

CMF C4 H6 O2



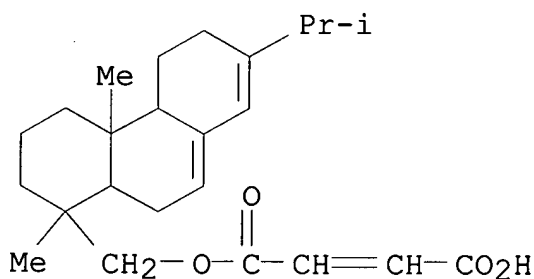
RN 213470-11-2 HCAPLUS

CN 2-Butenedioic acid, mono[[1,2,3,4,4a,4b,5,6,10,10a-decahydro-1,4a-dimethyl-7-(1-methylethyl)-1-phenanthrenyl]methyl] ester, polymer with 1-methylcyclohexyl 2-methyl-2-propenoate and 2-methyl-2-propenoic acid (9CI) (CA INDEX NAME)

CM 1

CRN 213470-10-1

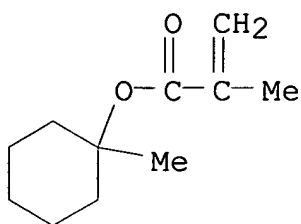
CMF C24 H34 O4



CM 2

CRN 76392-14-8

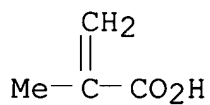
CMF C11 H18 O2



CM 3

CRN 79-41-4

CMF C4 H6 O2



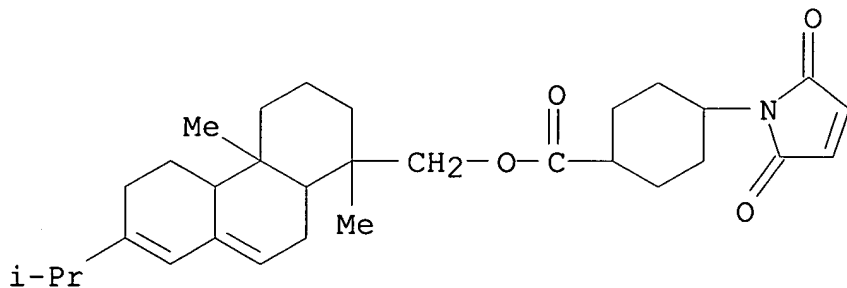
RN 213470-17-8 HCAPLUS

CN Cyclohexanecarboxylic acid, 2-(2,5-dihydro-2,5-dioxo-1H-pyrrol-1-yl)-, polymer with [1,2,3,4,4a,4b,5,6,10,10a-decahydro-1,4a-dimethyl-7-(1-methylethyl)-1-phenanthrenyl]methyl 4-(2,5-dihydro-2,5-dioxo-1H-pyrrol-1-yl)cyclohexanecarboxylate and 1-ethoxyethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

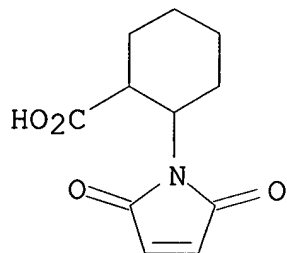
CRN 213470-16-7

CMF C31 H43 N O4



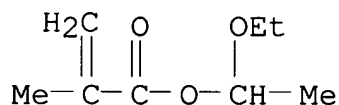
CM 2

CRN 212580-06-8  
CMF C11 H13 N O4



CM 3

CRN 51920-52-6  
CMF C8 H14 O3



IC ICM G03F007-039  
ICS G03F007-004; G03F007-033; G03F007-20; H01L021-027  
CC 74-5 (Radiation Chemistry, Photochemistry, and  
**Photographic** and Other Reprographic Processes)  
Section cross-reference(s): 38, 76  
IT 213469-88-6P **213469-89-7P 213469-90-0P**  
213469-92-2P 213469-93-3P 213469-95-5P 213469-97-7P  
213469-99-9P 213470-01-0P 213470-03-2P 213470-05-4P  
213470-07-6P 213470-09-8P **213470-11-2P** 213470-13-4P  
213470-15-6P **213470-17-8P** 213621-25-1P 213621-27-3P  
213621-28-4P  
RL: PNU (Preparation, unclassified); TEM (Technical or engineered  
material use); **PREP (Preparation)**; USES (Uses)  
(photoresist **composition** containing acid generator and polymer  
having alicyclic group)

L25 ANSWER 41 OF 54 HCAPLUS COPYRIGHT 2005 ACS on STN  
ACCESSION NUMBER: 1998:545694 HCAPLUS  
DOCUMENT NUMBER: 129:223253  
TITLE: Positive-working photoresist composition  
INVENTOR(S): Aogo, Toshiaki; Sato, Kenichiro

PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 58 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	
JP 10221852	A2	19980821	JP 1997-24011	1997 0206

PRIORITY APPLN. INFO.: JP 1997-24011

1997  
0206

AB The title composition comprises a resin having  $\geq 1$  repeating unit containing groups that are decomposed upon active ray or irradiation to generate acid,  $\geq 1$  alicyclic group-containing repeating unit, and  $\geq 1$  repeating unit containing groups that are decomposed by the action of acid to increase the solubility in alkaline developing solns.

The composition shows high sensitivity toward light of wavelength  $\leq 250$  nm, especially  $\leq 220$  nm, and high dry etch resistance and provides high resolution resist patterns with good profile independent of the elapse of time from exposure to post-bake.

IT **212580-14-8P**

RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)

(photoresist **composition** containing polymer having acid-generating group, alicyclic group, and alkali-soluble group)

RN 212580-14-8 HCAPLUS

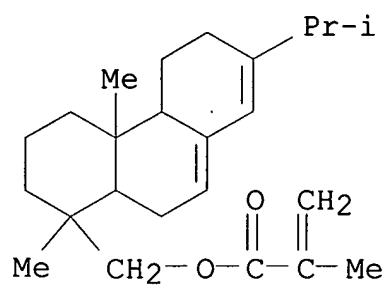
CN 2-Pentenoic acid, polymer with [1,2,3,4,4a,4b,5,6,10,10a-decahydro-1,4a-dimethyl-7-(1-methylethyl)-1-phenanthrenyl]methyl 2-methyl-2-propenoate, 3-[[[(2,5-dihydro-3,4-dimethyl-2,5-dioxo-1H-pyrrol-1-yl)oxy]sulfonyl]propyl 2-methyl-2-propenoate and methoxymethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 212580-13-7

CMF C24 H36 O2

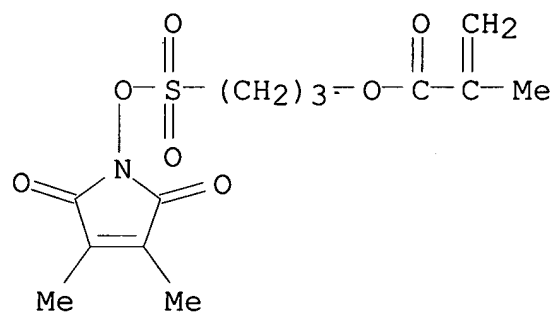




CM 2

CRN 212580-12-6

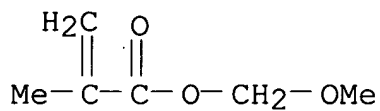
CMF C13 H17 N 07 S



CM 3

CRN 20363-82-0

CMF C6 H10 O3



CM 4

CRN 626-98-2

CMF C5 H8 O2

Et-CH=CH-CO<sub>2</sub>H

IC ICM G03F007-039  
ICS G03F007-039; G03F007-004; G03F007-033; H01L021-027  
CC 74-5 (Radiation Chemistry, Photochemistry, and  
**Photographic** and Other Reprographic Processes)  
Section cross-reference(s): 38  
IT 212579-87-8P 212579-89-0P 212579-92-5P 212579-95-8P  
212580-01-3P 212580-02-4P 212580-07-9P 212580-08-0P  
212580-11-5P **212580-14-8P** 212580-16-0P 212580-19-3P  
212580-21-7P 212580-24-0P 212580-27-3P 212580-30-8P  
212580-33-1P 212580-36-4P 212580-37-5P 212580-40-0P  
212580-41-1P 212628-39-2P  
RL: PNU (Preparation, unclassified); TEM (Technical or engineered  
material use); **PREP (Preparation)**; USES (Uses)  
(photoresist **composition** containing polymer having  
acid-generating group, alicyclic group, and alkali-soluble group)

L25 ANSWER 42 OF 54 HCAPLUS COPYRIGHT 2005 ACS on STN  
ACCESSION NUMBER: 1998:289699 HCAPLUS  
DOCUMENT NUMBER: 129:29192  
TITLE: Compositions for **antireflective**  
films and resist pattern formation therewith  
INVENTOR(S): Mizutani, Kazuyoshi; Yoshimoto, Hiroshi  
PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 17 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	
JP 10120940	A2	19980512	JP 1996-276573	1996 1018

PRIORITY APPLN. INFO.: JP 1996-276573  
1996  
1018

AB The compns. contain (A) polymeric light absorbers having  $\geq 1$   
units selected from CH<sub>2</sub>CR<sub>1</sub>XN:C(P<sub>1</sub>Y<sub>1</sub>m)P<sub>2</sub>Y<sub>2</sub>n and  
CH<sub>2</sub>CR<sub>1</sub>XN:C(P<sub>1</sub>Y<sub>1</sub>m)CR<sub>2</sub>R<sub>3</sub>P<sub>2</sub>Y<sub>2</sub>n (R<sub>1</sub> = H, C<sub>1</sub>-20 alkyl, halo, cyano; R<sub>2</sub>,  
R<sub>3</sub> = H, C<sub>1</sub>-20 hydrocarbyl, C<sub>1</sub>-6 alkoxy, OH, SH; X = bivalent  
group; P<sub>1</sub>, P<sub>2</sub> = C<sub>5</sub>-14 aromatic group, may be bridged by Q; Y<sub>1</sub>, Y<sub>2</sub> =

electron donating group, halo; m, n = 0-3; when m, n  $\geq$  2, multiple Y1, Y2 may differ; Q = O, CO, S, NR', direct link, alkylene; R' = H, C1-20 alkyl) and (B)  $\geq$ 1 compds. selected from melamine, guanamine, glycoluril, and/or urea derivs. substituted by  $\geq$ 1 groups selected from methylol, alkoxymethyl, and acyloxymethyl. Compns. containing (A) described as above and (C) phenol, naphthol, and/or hydroxyanthracene derivs. substituted by  $\geq$ 2 methylol, alkoxymethyl, and/or acyloxymethyl groups at their aromatic rings are also claimed. Thus, treating 4,4'-bis(diethylamino)benzophenone with NH<sub>2</sub>OH.HCl in MeOH in the presence of NaOH and further treating the resulting product with (chloromethyl)styrene gave a monomer ( $\lambda_{\text{max}}$  341 nm in MeOH), 14 g of which was polymerized with 6 g Me methacrylate to give a polymer. An **antireflective** film formed from a solution of 18 g of the polymer and 2 g hexamethoxymethylolmelamine did not dissolve in  $\gamma$ -butyrolactone or ethoxyethyl propionate and showed absorbance 4.188/ $\mu\text{m}$  at 365 nm, improved critical resolution of a resist pattern formed on it, and higher dry etching rate.

IT **208043-16-7P 208043-17-8P 208043-18-9P**

**208043-19-0P 208043-20-3P**

RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)

(light-absorbing group-containing polymer **compns.** for **antireflective** films with high dry etching rate)

RN 208043-16-7 HCAPLUS

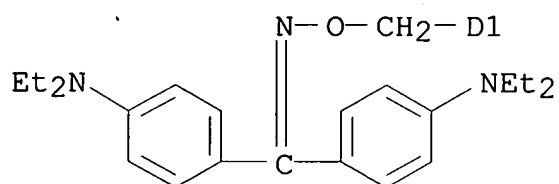
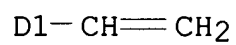
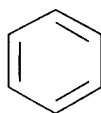
CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with bis[4-(diethylamino)phenyl]methanone O-[(ethenylphenyl)methyl]oxime and 5,5'-[1-[4-[1-[4-hydroxy-3,5-bis(hydroxymethyl)phenyl]-1-methylethyl]phenyl]ethylidene]bis[2-hydroxy-1,3-benzenedimethanol] (9CI) (CA INDEX NAME)

CM 1

CRN 207603-05-2

CMF C30 H37 N3 O

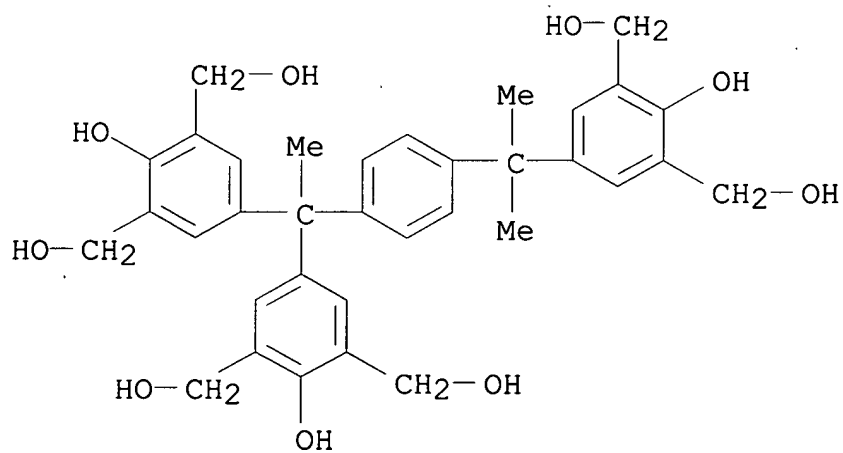
CCI IDS



CM 2

CRN 162846-57-3

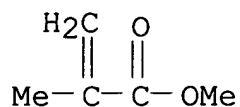
CMF C35 H40 O9



CM 3

CRN 80-62-6

CMF C5 H8 O2



RN 208043-17-8 HCAPLUS

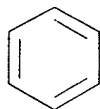
CN 2-Propenoic acid, 2-hydroxyethyl ester, polymer with  
bis[4-(diethylamino)phenyl]methanone O-  
[(ethenylphenyl)methyl]oxime and 5,5'-[1-[4-[1-[4-hydroxy-3,5-  
bis(hydroxymethyl)phenyl]-1-methylethyl]phenyl]ethylidene]bis[2-  
hydroxy-1,3-benzenedimethanol] (9CI) (CA INDEX NAME)

CM 1

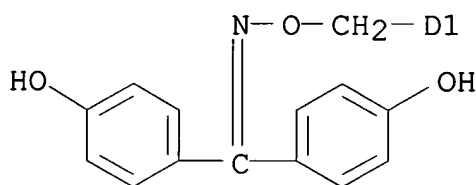
CRN 207603-06-3

CMF C22 H19 N O3

CCI IDS



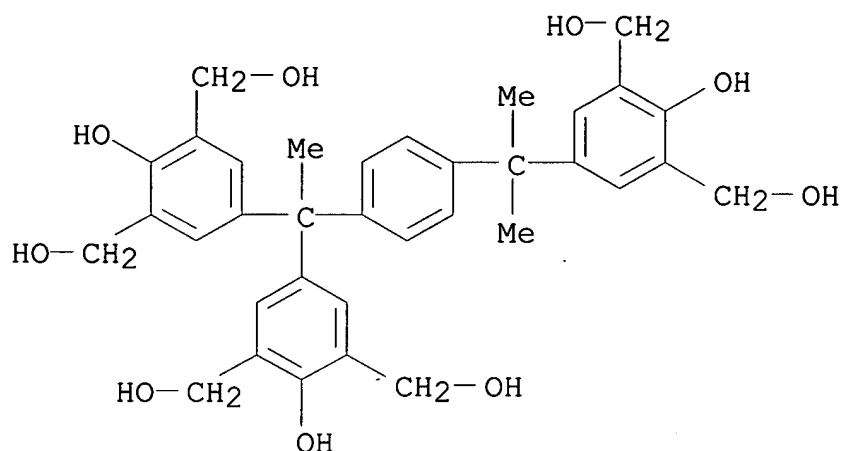
D1-CH=CH<sub>2</sub>



CM 2

CRN 162846-57-3

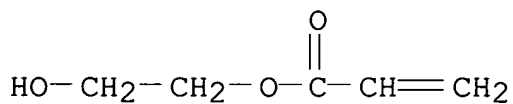
CMF C35 H40 O9



CM 3

CRN 818-61-1

CMF C5 H8 O3



RN 208043-18-9 HCAPLUS

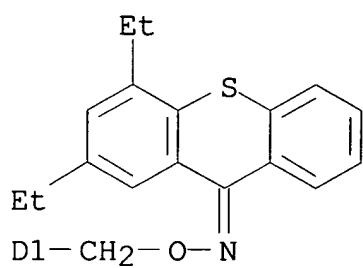
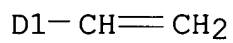
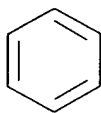
CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with  
 2,4-diethyl-9H-thioxanthen-9-one O-[(ethenylphenyl)methyl]oxime,  
 5,5'-[1-[4-[1-[4-hydroxy-3,5-bis(hydroxymethyl)phenyl]-1-  
 methylethyl]phenyl]ethylidene]bis[2-hydroxy-1,3-benzenedimethanol]  
 and 2-propenenitrile (9CI) (CA INDEX NAME)

CM 1

CRN 207603-07-4

CMF C26 H25 N O S

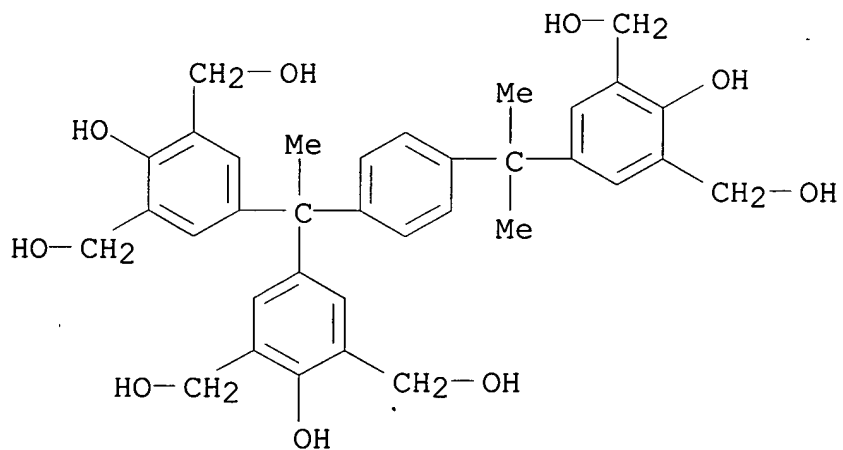
CCI IDS



CM 2

CRN 162846-57-3

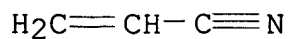
CMF C35 H40 O9



CM 3

CRN 107-13-1

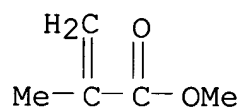
CMF C3 H3 N



CM 4

CRN 80-62-6

CMF C5 H8 O2



RN 208043-19-0 HCAPLUS

CN 2-Propenoic acid, 2-hydroxypropyl ester, polymer with  
10-methyl-9(10H)-acridinone O-[(ethenylphenyl)methyl]oxime and  
5,5'-[1-[4-[1-[4-hydroxy-3,5-bis(hydroxymethyl)phenyl]-1-  
methylethyl]phenyl]ethylidene]bis[2-hydroxy-1,3-benzenedimethanol]  
(9CI) (CA INDEX NAME)

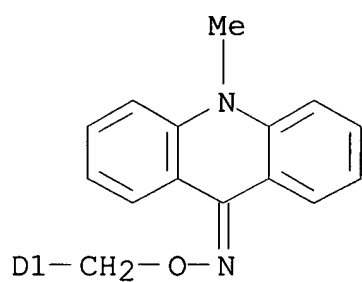
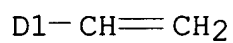
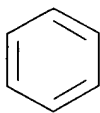
CM 1

CRN 207603-08-5

CMF C23 H20 N2 O

CCI IDS

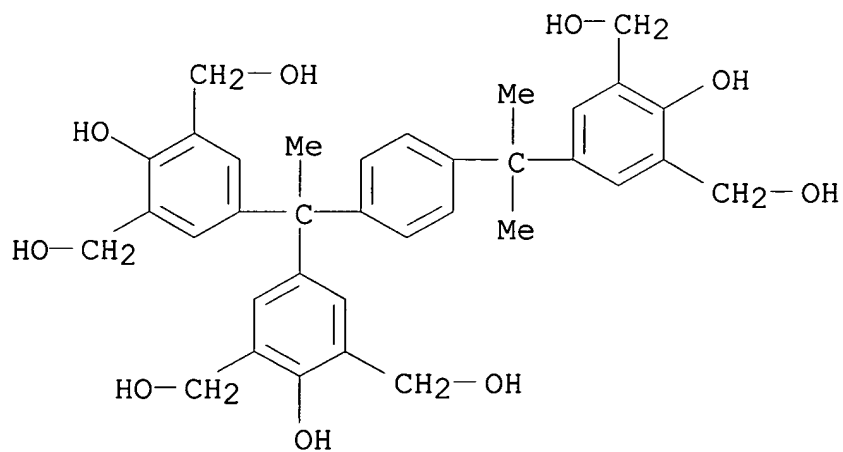




CM 2

CRN 162846-57-3

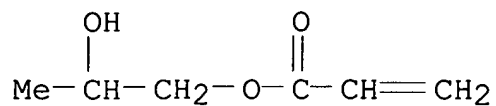
CMF C35 H40 O9



CM 3

CRN 999-61-1

CMF C6 H10 O3



RN 208043-20-3 HCAPLUS

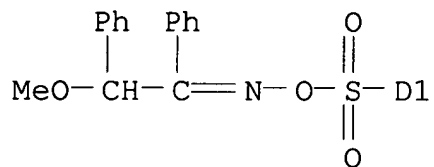
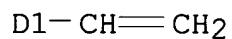
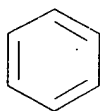
CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with  
5,5'-[1-[4-[1-[4-hydroxy-3,5-bis(hydroxymethyl)phenyl]-1-  
methylethyl]phenyl]ethylidene]bis[2-hydroxy-1,3-benzenedimethanol]  
and 2-methoxy-1,2-diphenylethanone O-[(ethenylphenyl)sulfonyl]oxim  
e (9CI) (CA INDEX NAME)

CM 1

CRN 207603-09-6

CMF C23 H21 N O4 S

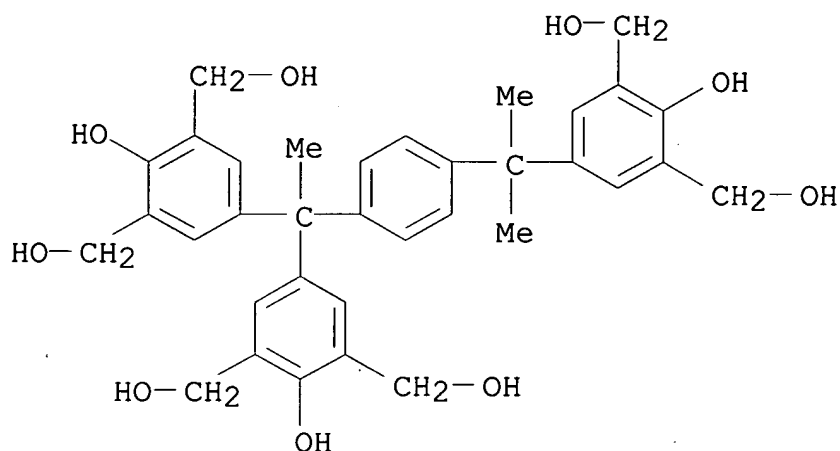
CCI IDS



CM 2

CRN 162846-57-3

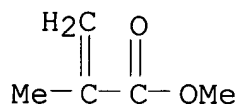
CMF C35 H40 O9



CM 3

CRN 80-62-6

CMF C5 H8 O2



IC ICM C09D005-00  
ICS G03F007-004; G03F007-11; H01L021-027; C08F012-26; C08L025-18;  
C08L057-12

CC 42-10 (Coatings, Inks, and Related Products)  
Section cross-reference(s): 74

ST benzophenone oxime polymer **antireflection** film;  
photoresist resolu improvement **antireflection** film  
oxime; methoxymethylolmelamine crosslink oxime polymer  
**antireflective** film

IT **Antireflective** films  
Photoresists  
(light-absorbing group-containing polymer compns. for  
**antireflective** films with high dry etching rate)

IT 208043-10-1P 208043-11-2P 208043-12-3P 208043-13-4P  
208043-14-5P **208043-16-7P 208043-17-8P**  
**208043-18-9P 208043-19-0P 208043-20-3P**  
208043-21-4P 208043-22-5P 208043-23-6P 208043-24-7P  
208043-25-8P  
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical  
or engineered material use); **PREP (Preparation)**; USES

(Uses)

(light-absorbing group-containing polymer **compns.** for **antireflective** films with high dry etching rate)

IT 207603-05-2P 207603-06-3P 207603-07-4P 207603-08-5P  
207603-09-6P

RL: IMF (Industrial manufacture); RCT (Reactant); PREP  
(Preparation); RACT (Reactant or reagent)

(light-absorbing group-containing polymer **compns.** for **antireflective** films with high dry etching rate)

IT 175387-03-8, ARCH 2 189201-29-4, FHi 620BC

RL: TEM (Technical or engineered material use); USES (Uses)

(light-absorbing group-containing polymer **compns.** for **antireflective** films with high dry etching rate)

IT 50-00-0, Formaldehyde, reactions

RL: RCT (Reactant); RACT (Reactant or reagent)

(reaction with bis(hydroxystyryl) ketone; light-absorbing group-containing polymer **compns.** for **antireflective** films with high dry etching rate)

IT 32001-70-0P 74613-79-9P, Benzoin methyl ether oxime  
89932-90-1P 166406-95-7P 207570-11-4P

RL: IMF (Industrial manufacture); RCT (Reactant); PREP  
(Preparation); RACT (Reactant or reagent)

(reaction with chlorostyrenes; light-absorbing group-containing polymer **compns.** for **antireflective** films with high dry etching rate)

IT 3654-49-7

RL: RCT (Reactant); RACT (Reactant or reagent)

(reaction with formaldehyde; light-absorbing group-containing polymer **compns.** for **antireflective** films with high dry etching rate)

IT 90-93-7, 4,4'-Bis(diethylamino)benzophenone 611-99-4,  
4,4'-Dihydroxybenzophenone 719-54-0, N-Methyl-9-acridone  
3524-62-7, Benzoin methyl ether 82799-44-8

RL: RCT (Reactant); RACT (Reactant or reagent)

(reaction with hydroxylamine; light-absorbing group-containing polymer **compns.** for **antireflective** films with high dry etching rate)

IT 5470-11-1, Hydroxylamine hydrochloride

RL: RCT (Reactant); RACT (Reactant or reagent)

(reaction with ketones; light-absorbing group-containing polymer **compns.** for **antireflective** films with high dry etching rate)

IT 30030-25-2 39864-41-0

RL: RCT (Reactant); RACT (Reactant or reagent)

(reaction with oximes; light-absorbing group-containing polymer **compns.** for **antireflective** films with high dry etching rate)

L25 ANSWER 43 OF 54 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1998:259847 HCAPLUS

DOCUMENT NUMBER: 128:315136

TITLE: Radiation-sensitive composition containing polymer acid-generator, pattern formation, and manufacture of semiconductor devices

INVENTOR(S): Hattori, Takashi; Yamanaka, Nagako; Shiraishi, Hiroshi

PATENT ASSIGNEE(S): Hitachi, Ltd., Japan; Hitachi Chemical Co., Ltd.

SOURCE: Jpn. Kokai Tokkyo Koho, 14 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

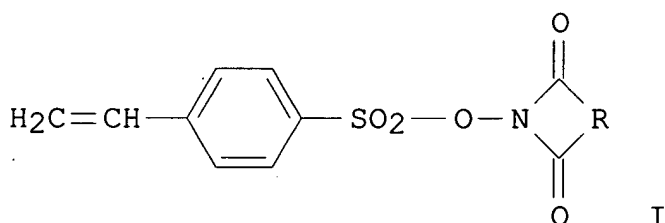
LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	
JP 10111563	A2	19980428	JP 1996-265744	1996 1007
PRIORITY APPLN. INFO.:			JP 1996-265744	1996 1007

GI



AB The polymer acid generator, which generates sulfonic acid on the polymer side chain by irradiation, is a polymer of monomer units containing I (R = arylene, alkylene, alkenylene). Radiation-sensitive composition comprises a component (A) of which the solubility to alkali aqueous solution changes by an acid-catalyzed reaction, and a polymer acid-generating agent having N-(sulfonyloxy)carboxyimide group Q (R = same as above) on the side chain generating sulfonic acid by

irradiation. The pattern forming method comprises steps of (1) coating the photosensitive composition, which contains the component A and a polymer acid-generating agent having sulfonic acid precursor on the side chain, on a support to form a film, and (2) patternwise exposing the film to active rays and developing it.

Manufacture of semiconductor devices containing the pattern-forming method

is also claimed. Diffusion of acids to unexposed area under post baking process is prevented, and high resolution patterns are obtained.

IT **122130-65-8DP**, hydrolyzed

RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)

(radiation-sensitizer resist **composition** containing polymer acid generator having sulfonyloxycarboxyimide group)

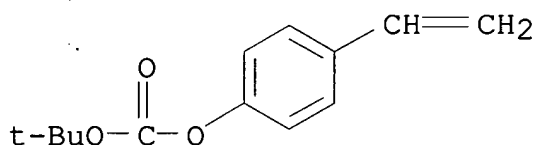
RN 122130-65-8 HCAPLUS

CN Carbonic acid, 1,1-dimethylethyl 4-ethenylphenyl ester, polymer with (4-ethenylphenyl)methyl acetate (9CI) (CA INDEX NAME)

CM 1

CRN 87188-51-0

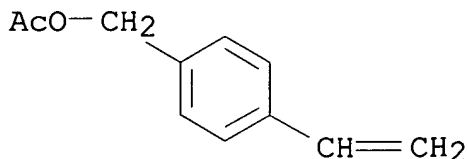
CMF C13 H16 O3



CM 2

CRN 1592-12-7

CMF C11 H12 O2



IC ICM G03F007-004

ICS G03F007-004; G03F007-038; G03F007-039; H01L021-027

CC 74-5 (Radiation Chemistry, Photochemistry, and

**Photographic and Other Reprographic Processes)**

Section cross-reference(s): 76

IT 24979-70-2DP, Poly(p-vinylphenol), ethers **122130-65-8DP**,  
hydrolyzed 206437-51-6P 206437-52-7P 206437-53-8P  
206437-54-9P 206437-55-0P 206438-00-8P

RL: PNU (Preparation, unclassified); TEM (Technical or engineered  
material use); **PREP (Preparation)**; USES (Uses)

(radiation-sensitizer resist **composition** containing polymer  
acid generator having sulfonyloxycarboxyimide group)

L25 ANSWER 44 OF 54 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1998:217682 HCAPLUS

DOCUMENT NUMBER: 128:315154

TITLE: Photosensitive composition and presensitized  
lithographic plate using it

INVENTOR(S): Kizu, Noriyuki; Hirai, Katsura

PATENT ASSIGNEE(S): Konica Co., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 22 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

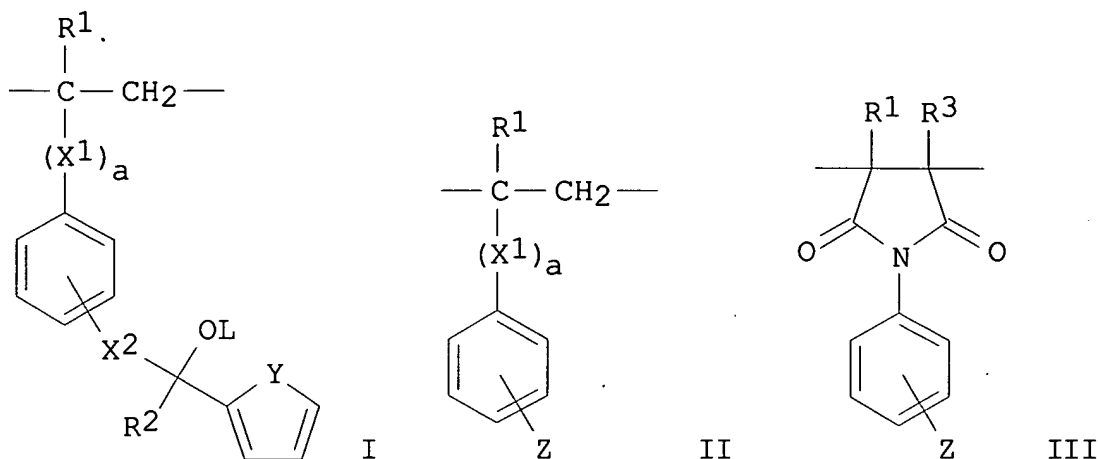
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 10090885	A2	19980410	JP 1996-243240	1996 0913

PRIORITY APPLN. INFO.:

JP 1996-243240

1996  
0913

GI



AB Title composition contains a photoacid generator, a sensitizing dye, and a vinyl copolymer having a structural unit I, or II and/or III [R1, R3 = H, Me; R2 = H, C1-6 alkyl; X1 = CONH, CO2, O; a = 0, 1; X2 = (CH2)n; n = 1-20; Y = O, S, NR'; R' = H, C1-6 alkyl; L = H, Ac, tert-butoxycarbonyl; Z = R4OH, R4OCOR5, R4OR5; R4, R5 = C1-6 alkyl]. The composition may contain an acid-crosslinkable compound selected from (alkyl-etherified) melamine-HCHO resins, (alkyl-etherified) benzoguanamine resins, (alkyl-etherified) urea resins, and urethane-aldehyde resins in place of the vinyl copolymer. The presensitized lithog. plate comprises a support having a hydrophilic surface coated with a photosensitive layer made of the above composition. The composition is capable of forming digital

images simply by using IR rays and shows high photosensitivity.

IT **206133-14-4P 206133-15-5P 206133-16-6P**

RL: DEV (Device component use); PNU (Preparation, unclassified);

**PREP (Preparation); USES (Uses)**

(photosensitive vinyl copolymer or acid-crosslinkable resin

**composition** for presensitized lithog. plate)

RN 206133-14-4 HCAPLUS

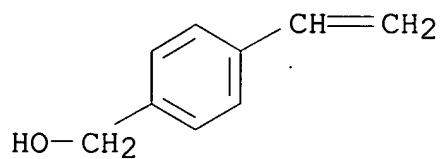
CN 2-Propenoic acid, 2-methyl-, polymer with 4-ethenylbenzenemethanol, methyl 2-methyl-2-propenoate and 2-propenenitrile (9CI) (CA INDEX NAME)

CM 1

CRN 1074-61-9

CMF C9 H10 O

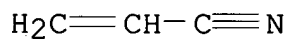




CM 2

CRN 107-13-1

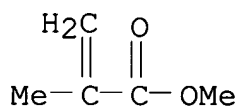
CMF C3 H3 N



CM 3

CRN 80-62-6

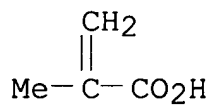
CMF C5 H8 O2



CM 4

CRN 79-41-4

CMF C4 H6 O2

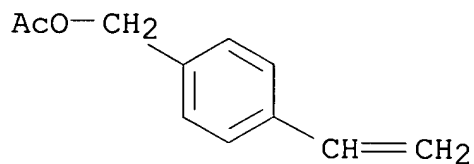


RN 206133-15-5 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, polymer with (4-ethenylphenyl)methyl acetate, methyl 2-methyl-2-propenoate and 2-propenenitrile (9CI)  
(CA INDEX NAME)

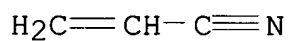
CM 1

CRN 1592-12-7  
CMF C11 H12 O2



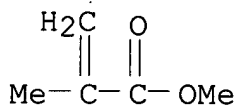
CM 2

CRN 107-13-1  
CMF C3 H3 N



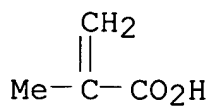
CM 3

CRN 80-62-6  
CMF C5 H8 O2



CM 4

CRN 79-41-4  
CMF C4 H6 O2



RN 206133-16-6 HCAPLUS

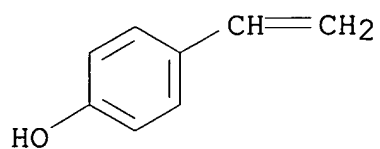
CN 2-Propenoic acid, 2-methyl-, polymer with 4-ethenylphenol,  
(4-ethenylphenyl)methyl acetate and 2-propenenitrile (9CI) (CA

## INDEX NAME)

CM 1

CRN 2628-17-3

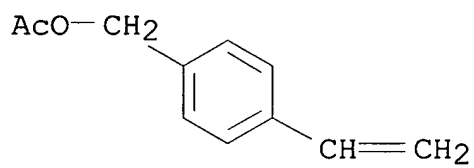
CMF C8 H8 O



CM 2

CRN 1592-12-7

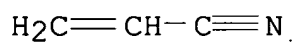
CMF C11 H12 O2



CM 3

CRN 107-13-1

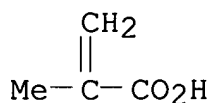
CMF C3 H3 N



CM 4

CRN 79-41-4

CMF C4 H6 O2

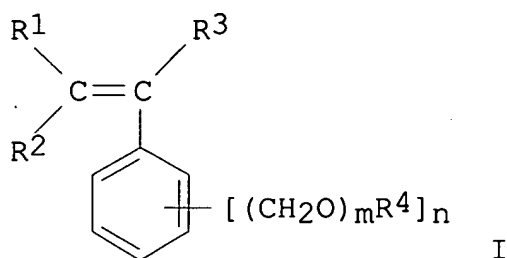


IC ICM G03F007-004  
ICS G03F007-00; G03F007-039  
CC 74-6 (Radiation Chemistry, Photochemistry, and  
**Photographic** and Other Reprographic Processes)  
Section cross-reference(s): 38  
IT 9003-08-1P, Nikalac MW 30 9011-05-6P, Urea resin 26160-89-4P,  
Benzoguanamine resin 206133-11-1P 206133-12-2P 206133-13-3P  
**206133-14-4P 206133-15-5P 206133-16-6P**  
206133-18-8P 206133-19-9P  
RL: DEV (Device component use); PNU (Preparation, unclassified);  
**PREP (Preparation); USES (Uses)**  
(photosensitive vinyl copolymer or acid-crosslinkable resin  
**composition** for presensitized lithog. plate)

L25 ANSWER 45 OF 54 HCAPLUS COPYRIGHT 2005 ACS on STN  
ACCESSION NUMBER: 1997:602524 HCAPLUS  
DOCUMENT NUMBER: 127:301268  
TITLE: Radiation-sensitive resist composition useful  
in production of electric circuits  
INVENTOR(S): Shimokawa, Tsutomu; Sugiura, Makoto; Udaka,  
Tomohiro; Endo, Masayuki  
PATENT ASSIGNEE(S): Japan Synthetic Rubber Co., Ltd., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 13 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	
JP 09230596	A2	19970905	JP 1996-36458	1996 0223
JP 3424225	B2	20030707		
PRIORITY APPLN. INFO.:			JP 1996-36458	1996 0223

GI



AB The title composition comprises (1) a copolymer containing unsatd. carboxylic acids and I ( $R_1$ -3 = H or C1-5 alkyl;  $R_4$  = C1-5 alkyl;  $m, n$  = 1-5) as monomers, (2) a 1,2-quinonediazide compound, and (3) an acid precursor. The composition is useful as a resist developable with alkaline aqueous solns., which shows good chemical resistance, sensitivity, developability, and thermal resistance, and is useful for production of elec. circuits. Thus, a resist comprised methacrylic acid-p-vinylbenzyl Me ether-dicyclopentanyl methacrylate copolymer, 1,2-naphthoquinonediazido-5-sulfonate of 4,4'-[1-(4-(1-(4-hydroxyphenyl)-1-methylethyl)phenyl)ethylidene]bisphenol, and San-Aid SI L150 (acid precursor).

IT **196874-78-9P 196874-80-3P 196874-81-4P**

RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)  
(resist **composition** containing copolymer of unsatd. carboxylic acid and vinylbenzyl alkyl ether)

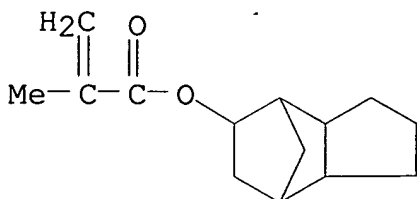
RN 196874-78-9 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, polymer with 1-ethenyl-4-(methoxymethyl)benzene and octahydro-4,7-methano-1H-inden-5-yl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 34759-34-7

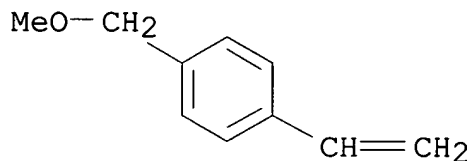
CMF C14 H20 O2



CM 2

CRN 13051-65-5

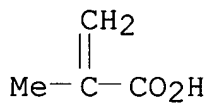
CMF C10 H12 O



CM 3

CRN 79-41-4

CMF C4 H6 O2



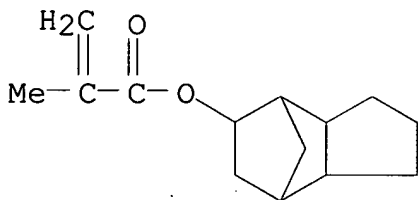
RN 196874-80-3 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, polymer with 1-ethenyl-4-(methoxymethyl)benzene, 2-methyl-1,3-butadiene and octahydro-4,7-methano-1H-inden-5-yl 2-methyl-2-propenoate (9CI)  
(CA INDEX NAME)

CM 1

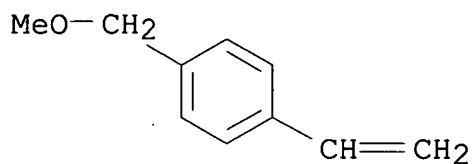
CRN 34759-34-7

CMF C14 H20 O2



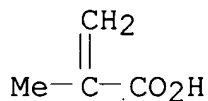
CM 2

CRN 13051-65-5  
CMF C10 H12 O



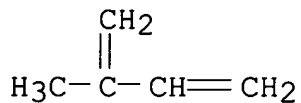
CM 3

CRN 79-41-4  
CMF C4 H6 O2



CM 4

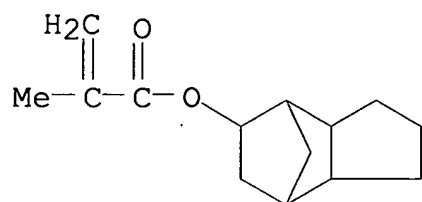
CRN 78-79-5  
CMF C5 H8



RN 196874-81-4 HCAPLUS  
CN 2-Propenoic acid, 2-methyl-, polymer with ethenylbenzene,  
1-ethenyl-4-(methoxymethyl)benzene, 2-methyl-1,3-butadiene and  
octahydro-4,7-methano-1H-inden-5-yl 2-methyl-2-propenoate (9CI)  
(CA INDEX NAME)

CM 1

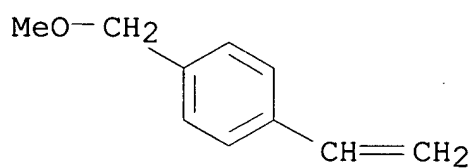
CRN 34759-34-7  
CMF C14 H20 O2



CM 2

CRN 13051-65-5

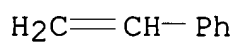
CMF C10 H12 O



CM 3

CRN 100-42-5

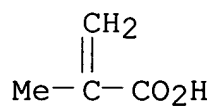
CMF C8 H8



CM 4

CRN 79-41-4

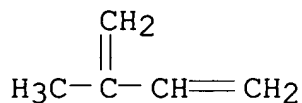
CMF C4 H6 O2



CM 5



CRN 78-79-5  
CMF C5 H8

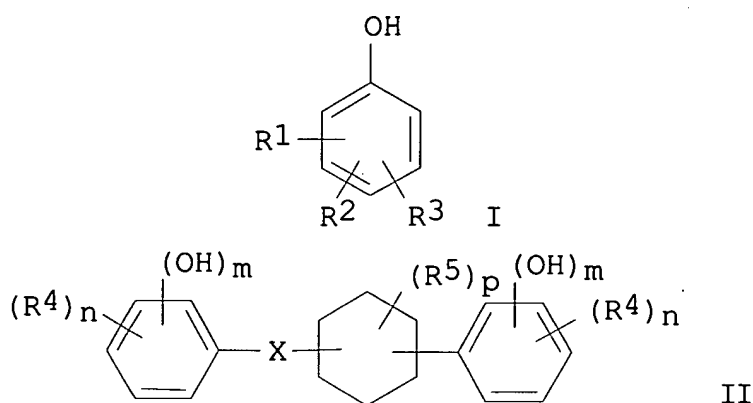


IC ICM G03F007-039  
ICS G03F007-004; G03F007-022; G03F007-033; H01L021-027  
CC 74-5 (Radiation Chemistry, Photochemistry, and  
**Photographic** and Other Reprographic Processes)  
Section cross-reference(s): 37, 76  
IT **196874-78-9P 196874-80-3P 196874-81-4P**  
RL: PNU (Preparation, unclassified); TEM (Technical or engineered  
material use); **PREP (Preparation)**; USES (Uses)  
(resist **composition** containing copolymer of unsatd. carboxylic  
acid and vinylbenzyl alkyl ether)

L25 ANSWER 46 OF 54 HCAPLUS COPYRIGHT 2005 ACS on STN  
ACCESSION NUMBER: 1997:533745 HCAPLUS  
DOCUMENT NUMBER: 127:154654  
TITLE: Positive-working photoresist composition  
containing novolak resin  
INVENTOR(S): Kawabe, Yasumasa; Tan, Shiro  
PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 17 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	
JP 09160234	A2	19970620	JP 1995-320588	1995 1208
PRIORITY APPLN. INFO.: JP 1995-320588				1995 1208

GI



AB The title photoresist composition contains 1,2-quinonediazide compound and a novolak resin which is prepared by condensation of an aldehyde with a phenol compound containing I and/or II [R1-3 = H, OH, halo, (ar)alkyl, alkoxy(carbonyl), etc.; R4 = H, halo, (cyclo)alkyl, hydroxyalkyl, aryl, etc.; R5 = H, alkyl; X = single bond, C(di-Me); m, n = integer of 1-3; m + n = 5; l = integer of 1-3] as an alkali-soluble resin. The composition with high sensitivity gives

a resist showing high resolution, excellent develop ability, and high heat resistance, especially dry etching resistance, and is suitable for manufacture of semiconductor apparatus, circuit substrates for liquid crystal and thermal head, etc.

IT **193202-65-2P**

RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)  
(soluble in alkalies; pos.-working photoresist **composition** containing novolak resin)

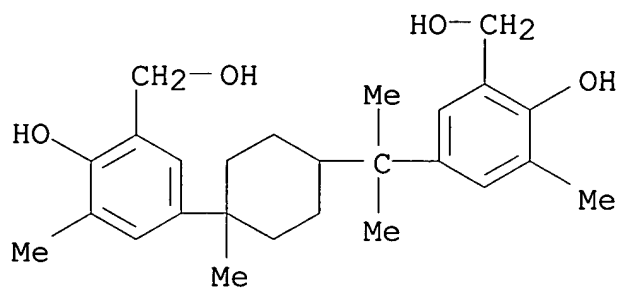
RN 193202-65-2 HCAPLUS

CN Formaldehyde, polymer with 2-hydroxy-5-[1-[4-[4-hydroxy-3-(hydroxymethyl)-5-methylphenyl]-4-methylcyclohexyl]-1-methylethyl]-3-methylbenzenemethanol, 3-methylphenol and 4-methylphenol (9CI)  
(CA INDEX NAME)

CM 1

CRN 167019-62-7

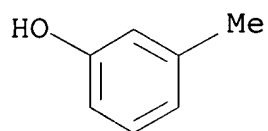
CMF C26 H36 O4



CM 2

CRN 108-39-4

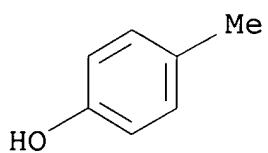
CMF C7 H8 O



CM 3

CRN 106-44-5

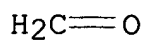
CMF C7 H8 O



CM 4

CRN 50-00-0

CMF C H2 O

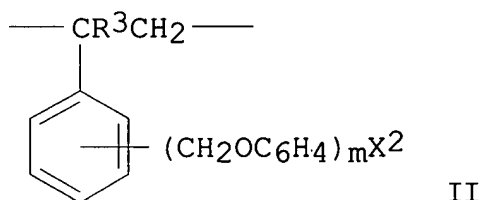
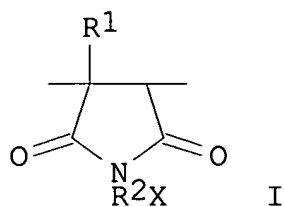


IC ICM G03F007-023  
ICS G03F007-022; H01L021-027  
CC 74-5 (Radiation Chemistry, Photochemistry, and  
**Photographic** and Other Reprographic Processes)  
Section cross-reference(s): 38, 76  
IT 193202-60-7P, Formaldehyde;m-cresol;p-cresol;2,3-xyleneol;4,4'-(1,3-  
dimethyl-1,3-cyclohexanediyl)bis[phenol] copolymer 193202-61-8P  
193202-62-9P 193202-63-0P 193202-64-1P **193202-65-2P**  
193202-67-4P 193202-68-5P 193202-69-6P  
RL: PNU (Preparation, unclassified); TEM (Technical or engineered  
material use); **PREP (Preparation)**; USES (Uses)  
(soluble in alkalies; pos.-working photoresist **composition**  
containing novolak resin)

L25 ANSWER 47 OF 54 HCAPLUS COPYRIGHT 2005 ACS on STN  
ACCESSION NUMBER: 1997:509271 HCAPLUS  
DOCUMENT NUMBER: 127:212528  
TITLE: Curable composition of maleimide-containing  
polymer and oxazoline compound  
INVENTOR(S): Akutsu, Mitsuo; Okawa, Kazuo; Tominaga,  
Nobuhide; Saito, Seiichi  
PATENT ASSIGNEE(S): Asahi Denka Kogyo K. K., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 10 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	
JP 09194675	A2	19970729	JP 1996-9606	1996 0123
PRIORITY APPLN. INFO.:			JP 1996-9606	1996 0123

GI



AB The composition contains a copolymer having 5-95% maleimide-containing repeating unit I, 5-95% styryl-type repeating unit II, and <50% CR4X3CH2 (R1, R3, R4 = H, Me; R2 = C1-18 alkylene, cycloalkylene, arylene; X1, X2 = H, C1-4 alkyl, CO2H; X3 = CO2H, CONR5R6, CO2R7; R5, R6 = H, C1-8 alkyl; R7 = C1-4 alkyl;  $\geq 1$  of X1-X3 = CO2H; n = 0, 1) and a compound having  $\geq 2$  oxazoline. The composition is useful for alkali-developable photoresist for elec. insulator showing good heat resistance, peeling strength, and dielec. property on circuit board.

IT **194472-63-4P**

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)  
(curable **composition** of maleimide-containing polymer and oxazoline for photoresist)

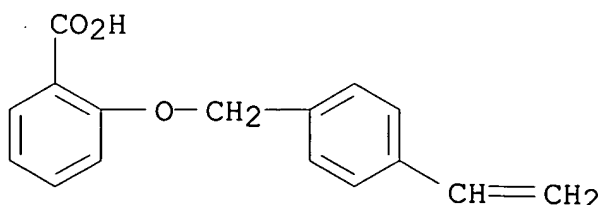
RN 194472-63-4 HCAPLUS

CN Benzoic acid, 2-[(4-ethenylphenyl)methoxy]-, polymer with 1-phenyl-1H-pyrrole-2,5-dione (9CI) (CA INDEX NAME)

CM 1

CRN 194472-62-3

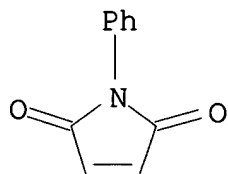
CMF C16 H14 O3



CM 2

CRN 941-69-5

CMF C10 H7 N O2



IC ICM C08L035-06

ICS C08K005-101; C08K005-353; C08L025-18

CC 74-5 (Radiation Chemistry, Photochemistry, and  
**Photographic** and Other Reprographic Processes)IT 124489-29-8P, N-(p-Carboxyphenyl)maleimide-styrene copolymer  
130055-33-3P **194472-63-4P** 194472-64-5P 194472-65-6PRL: IMF (Industrial manufacture); TEM (Technical or engineered  
material use); **PREP (Preparation)**; USES (Uses)  
(curable **composition** of maleimide-containing polymer and  
oxazoline for photoresist)

L25 ANSWER 48 OF 54 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1997:483100 HCAPLUS

DOCUMENT NUMBER: 127:183336

TITLE: Radiation-sensitive polyester  
macromonomer-containing polymer composition  
for manufacture of color filter

INVENTOR(S): Suzuki, Nobuo; Kato, Eiichi

PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 41 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	
JP 09179299	A2	19970711	JP 1995-333471	

1995  
1221

PRIORITY APPLN. INFO.:

JP 1995-333471

1995

1221

AB The composition containing a radiation-sensitive compound and a pigment

(M) 5 comprises a binder containing a copolymer [weight-average mol. weight

+ 104-1 + 104 (sic)] manufactured from  $\geq 1$  polyester macromonomer with M 1 + 103-1 + 104 selected from  $f1HC:C(f2)X1Y1CO2(W1OCOW2CO2)nR61$  and  $f3HC:C(f4)X2Y2CO2(W3CO2)nR62$  [f1-2 = H, halo, cyano, C1-8 hydrocarbyl, CO2T1, C1-8 hydrocarbyl-containing CO2T2; T1-2 = C1-18 hydrocarbyl; X1 = none, CO2, OCO, (CH2)xCO2, (CH2)xOCO, CONd1, CONHCONH, CONHCO2, O, C6H4, SO2; W1-2 = divalent aliphatic or aromatic group; R61 = H,

hydrocarbyl;

d1 = H, C1-12 hydrocarbyl]. The composition showed good pigment dispersibility and coatability.

IT **194024-47-0P**

RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)

(radiation-sensitive polyester macromonomer-containing polymer **composition** for manufacture of color filter)

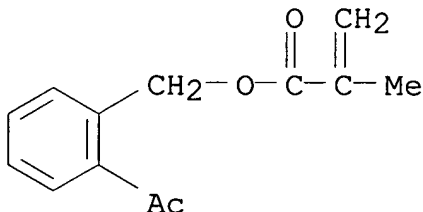
RN 194024-47-0 HCAPLUS

CN Butanedioic acid, mono[2-[2-[(2-methyl-1-oxo-2-propenyl)oxy]ethoxy]ethyl] ester, polymer with (2-acetylphenyl)methyl 2-methyl-2-propenoate, graft (9CI) (CA INDEX NAME)

CM 1

CRN 130094-44-9

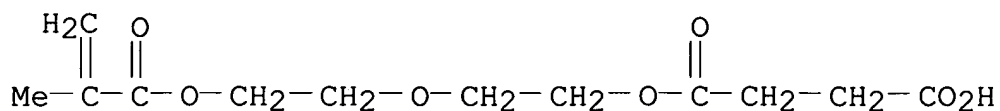
CMF C13 H14 O3



CM 2

CRN 128645-95-4

CMF C12 H18 O7



IC ICM G03F007-033  
ICS C08F299-04; G02B005-20; G03F007-004; C08L033-04

CC 74-5 (Radiation Chemistry, Photochemistry, and  
**Photographic** and Other Reprographic Processes)  
Section cross-reference(s): 35, 38, 73

IT 65256-57-7P 135254-18-1P 135254-61-4P 135277-87-1P  
135327-00-3P 135868-51-8P 135868-54-1P 135868-55-2P  
135868-58-5P 135868-60-9P 135868-61-0P 135868-62-1P  
135868-63-2P 135868-65-4P 135890-01-6P 136217-44-2P,  
1,4-Butanediol-succinic anhydride copolymer acrylate  
136218-66-1P, 12-Hydroxystearic acid homopolymer methacrylate  
137397-61-6P, Glutaric acid-1,6-hexanediol copolymer methacrylate  
143439-29-6P 144056-81-5P 144056-82-6P 144056-83-7P  
144056-84-8P 144056-85-9DP, reaction products with grafted  
acrylic polyester 144056-86-0DP, reaction products with grafted  
acrylic polyester 144057-33-0P 144057-37-4P 144327-83-3DP,  
reaction products with azobis compound 194024-33-4P 194024-41-4P  
**194024-47-0P** 194024-50-5DP, reaction products with  
mercapto compound 194024-55-0DP, reaction products with mercapto  
compound 194024-59-4DP, reaction products with mercapto compound  
194024-69-6DP, reaction products with mercapto compound  
194024-75-4DP, reaction products with grafted acrylic polyester  
194024-83-4DP, reaction products with grafted acrylic polyester  
194024-86-7DP, reaction products with grafted acrylic polyester  
194024-96-9DP, reaction products with grafted acrylic polyester  
194025-00-8DP, reaction products with mercapto compound  
194025-08-6DP, reaction products with mercapto compound  
194025-12-2DP, reaction products with mercapto compound  
194025-16-6DP, reaction products with grafted acrylic polyester  
194025-20-2DP, reaction products with grafted acrylic polyester  
194025-21-3DP, reaction products with grafted acrylic polyester  
194025-34-8P 194025-37-1P 194025-40-6P 194025-42-8P  
194025-44-0P 194025-46-2P 194025-48-4P 194025-49-5P  
194025-50-8P 194025-52-0DP, reaction products with azobis compound  
194025-55-3P 194025-56-4P 194025-60-0P 194025-62-2P  
194025-64-4P 194025-67-7P 194025-69-9P 194025-71-3P  
194027-31-1P 194027-32-2P 194027-33-3P 194027-34-4P  
194027-35-5DP, reaction products with azobis compound  
194027-36-6DP, reaction products with azobis compound  
194027-37-7DP, reaction products with azobis compound  
RL: PNU (Preparation, unclassified); TEM (Technical or engineered  
material use); **PREP (Preparation)**; USES (Uses)



(radiation-sensitive polyester macromonomer-containing polymer  
**composition** for manufacture of color filter)

L25 ANSWER 49 OF 54 HCAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 1997:483030 HCAPLUS  
 DOCUMENT NUMBER: 127:183335  
 TITLE: Radiation-sensitive composition useful in  
 production of color filter  
 INVENTOR(S): Suzuki, Nobuo; Kato, Eiichi  
 PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 37 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	
JP 09171253	A2	19970630	JP 1995-331855	1995 1220
PRIORITY APPLN. INFO.:			JP 1995-331855	1995 1220

AB The title composition contains (a) a binder resin of a graft copolymer resin with weight average mol. weight ( $M_w$ )  $3 + 104 - 1 + 106$  containing, as a polymer component,  $\geq 1$  of polyester-type macromonomers with  $M_w$   $1 + 103 - 1.5 + 104$   
 CHf1: Cf2[X1Y1Z1(OCW1CO2W2O)R61] and CHf3: Cf4[X2Y2Z2(OCW3O)R62]  
 [(OCW1CO2W2O) and (OCW3O) indicate repeating units; f1-4 = H, halo, CN, C1-8 hydrocarbon, CO2V1, CO2V2 which links via C1-8 hydrocarbons (V1, V2 = C1-18 hydrocarbon); X1, X2 = single bond, CO2, OCO, (CH2)n1CO2, (CH2)n2OCO (n1, n2 = 1-3), CONd1 (d1 = H, C1-12 hydrocarbon), CONHCONH, CONHCO2, O, C6H4, SO2; Y1, Y2 = linking group; Z1, Z2 = CH2, O, NH; W1, W2 = divalent aliphatic or divalent aromatic group which may contain  $\geq 1$  linking group selected from O, S, Nd2 (d2 = H, C1-12 hydrocarbon), SO2, CO2, OCO, CONHCO, NHCONH, CONd3, SO2Nd4, and Sid3d4 (d3, d4 = H, C1-12 hydrocarbon), organic residue composed of these residues; R61, R62 = H, hydrocarbon, COR63 (R63 = hydrocarbon); W3 = divalent aliphatic group], (b) a radiation-sensitive compound, and (c) a pigment. The pigment is dispersed well as fine particles in the composition, and the composition shows good coatability and provides high quality color filters.

IT 193752-06-6P

RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)(radiation-sensitive resist **composition** containing polyester graft copolymer and pigment for color filters)

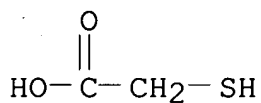
RN 193752-06-6 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, ethyl ester, telomer with  $\alpha$ -[(4-ethenylphenyl)methyl]- $\omega$ -hydroxypoly[oxy(1,4-dioxo-1,4-butanediyl)oxy-1,4-butanediyl] and mercaptoacetic acid, graft (9CI) (CA INDEX NAME)

CM 1

CRN 68-11-1

CMF C2 H4 O2 S



CM 2

CRN 193752-05-5

CMF ((C8 H12 O4)<sub>n</sub> C9 H10 O . C6 H10 O2)<sub>x</sub>

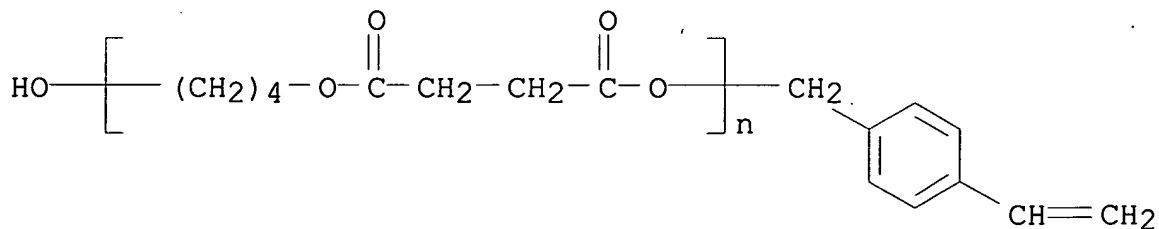
CCI PMS

CM 3

CRN 135254-67-0

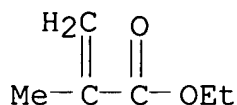
CMF (C8 H12 O4)<sub>n</sub> C9 H10 O

CCI PMS



CM 4

CRN 97-63-2  
CMF C6 H10 O2



IC ICM G03F007-033  
ICS C08F299-04; G02B005-20; G03F007-004; C08L033-04  
CC 74-5 (Radiation Chemistry, Photochemistry, and  
**Photographic** and Other Reprographic Processes)  
Section cross-reference(s): 38  
IT 135803-37-1P 135868-48-3P, 1,4-Butanediol-ethyl  
methacrylate-succinic anhydride graft copolymer 135868-70-1P  
135868-74-5P 135868-75-6P 135868-76-7P 135868-77-8P  
135868-78-9P 135868-81-4P 141431-84-7P 144056-87-1P  
144057-35-2P 144820-47-3P 144857-85-2P 144857-86-3P  
144857-87-4P 144857-93-2P 144857-94-3P 144857-95-4P  
144857-96-5P 144857-97-6P 144884-99-1P 193751-90-5P  
193751-91-6P 193751-92-7P 193751-93-8P 193751-94-9P  
193751-95-0P 193751-96-1P 193751-97-2P 193751-98-3P  
193751-99-4P 193752-00-0P 193752-01-1P 193752-02-2P  
193752-03-3P 193752-04-4P **193752-06-6P** 193752-08-8P  
193752-10-2P 193752-13-5P 193752-15-7P 193752-17-9P  
193752-19-1P 193752-21-5P 193752-23-7P 193752-25-9P  
193752-27-1P 193752-31-7P 193752-32-8P 193752-33-9P  
193752-34-0P 193752-35-1P 193752-36-2P 193752-37-3P  
193752-38-4P 193752-45-3P 193752-46-4P 193752-49-7P  
193752-52-2P 193752-54-4P 193752-58-8P 193752-59-9P  
193752-60-2P 193752-61-3P 193752-62-4P 193752-63-5P  
193752-64-6P

RL: PNU (Preparation, unclassified); TEM (Technical or engineered  
material use); **PREP (Preparation)**; USES (Uses)  
(radiation-sensitive resist **composition** containing polyester  
graft copolymer and pigment for color filters)

L25 ANSWER 50 OF 54 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1997:478728 HCAPLUS

DOCUMENT NUMBER: 127:115298

TITLE: Radiation-sensitive composition useful in  
production of color filter

INVENTOR(S): Suzuki, Nobuo; Kato, Eiichi

PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 32 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO. -----	KIND ----	DATE -----	APPLICATION NO. -----	DATE
JP 09171252	A2	19970630	JP 1995-331854	1995 1220

PRIORITY APPLN. INFO.: JP 1995-331854  
 1995  
 1220

AB The title composition contains (a) a binder resin of a graft copolymer with weight average mol. weight (Mw) 5 + 104-1 + 106 containing, as a polymer component,  $\geq 1$  macromonomer with Mw 1 + 103-2 + 104 CHf1:Cf2[XYO(WO)nR61] [f1, f2 = H, halo, CN, hydrocarbon, CO2R1 which may link via hydrocarbons; R1 = H, (substituted) hydrocarbon; X = CO2, OCO, (CH2)1OCO, (CH2)1CO2 (1 = 1-3), O, SO2, CO, CONQ1, SO2NQ1 (Q1 = H, hydrocarbon), CONHCO2, CONHCONH, C6H4; Y = linking group; (WO) indicates a repeating unit; n = 1-3, when n  $\geq 2$ , W is different from the W in the adjacent unit (WO); W = CHr1CHr2 (r1, r2 = H, alkyl), (CH2)4; R61 = H, hydrocarbon, COR62 (R62 = hydrocarbon)], (b) a radiation-sensitive compound, and (c) a pigment. The pigment is dispersed well as fine particles in the composition, and the composition

shows good coatability and provides high quality color filters. Thus, a radiation-sensitive composition was prepared by using graft copolymer HOOC(CH2)2CMe(CN)[{CH2CMe(CO2CH2Ph)}80{CH2CMe(CO2CH2CH2OH)}20], dipentaerythritol pentaacrylate, 4-[o-bromo-p-N,N-di(ethoxycarbonyl)aminophenyl]-2,6-di(trichloromethyl)-s-triazine, 7-[(4-chloro-6-(diethylamino)-s-triazin-2-yl)amino]-3-phenylcoumarin, C.I. Pigment Red 155, and C.I. Pigment Yellow 83.

IT **192386-18-8DP**, reaction products with azobis(cyanovaleric acid)

RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)

(radiation-sensitive resist **composition** containing graft polymer and pigment for color filter)

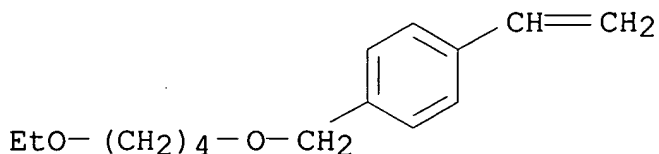
RN 192386-18-8 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-chlorophenyl ester, polymer with 1-ethenyl-4-[(4-ethoxybutoxy)methyl]benzene, graft (9CI) (CA INDEX NAME)

CM 1

CRN 192386-17-7

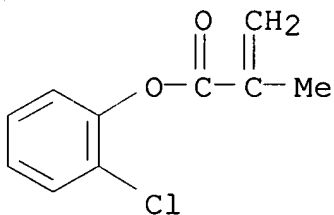
CMF C15 H22 O2



CM 2

CRN 18967-23-2

CMF C10 H9 Cl O2



IC ICM G03F007-033

ICS C08F299-04; G02B005-20; G03F007-004; C08L033-04

CC 74-5 (Radiation Chemistry, Photochemistry, and  
**Photographic** and Other Reprographic Processes)

Section cross-reference(s): 38

IT 60-24-2DP, 2-Mercaptoethanol, reaction products with acrylic graft copolymer 68-11-1DP, Thioglycolic acid, reaction products with acrylic graft copolymer 70-49-5DP, Mercaptosuccinic acid, reaction products with acrylic graft copolymer 107-96-0DP, 3-Mercaptopropanoic acid, reaction products with acrylic graft copolymer 147-93-3DP, o-Mercaptobenzoic acid, reaction products with acrylic graft copolymer 2638-94-0DP, reaction products with acrylic graft copolymer 4693-47-4DP, reaction products with acrylic graft copolymer 19706-80-0DP, 2,2'-Azobis(2-cyanopropanol), reaction products with acrylic graft copolymer 55428-59-6DP, reaction products with acrylic graft copolymer 61551-69-7DP, reaction products with acrylic graft copolymer 104222-30-2DP, 2,2'-Azobis[2-methyl-N-(1,1-bis(hydroxymethyl)ethyl)propionamide, reaction products with acrylic graft copolymer 104222-32-4DP, 2,2'-Azobis[2-methyl-N-(1,1-bis(hydroxymethyl)-2-hydroxyethyl)propionamide, reaction products with acrylic graft copolymer 118585-12-9DP,

2,2'-Azobis[2-(1-(2-hydroxyethyl)-2-imidazolin-2-yl]propane,  
reaction products with acrylic graft copolymer 118585-14-1DP,  
2,2'-Azobis[2-(5-hydroxy-3,4,5,6-tetrahydropyrimidin-2-yl]propane,  
reaction products with acrylic graft copolymer 126969-33-3DP,  
reaction products with acrylic graft copolymer 138059-37-7DP,  
reaction products with acrylic graft copolymer 192386-11-1DP,  
Benzyl methacrylate-2-hydroxyethyl methacrylate graft copolymer,  
reaction products with azobis(cyanovaleric acid) 192386-12-2DP,  
2-(2-Hydroxyethoxy)ethyl methacrylate-phenyl methacrylate graft  
copolymer, reaction products with azobis(cyanovaleric acid)  
192386-15-5DP, reaction products with azobis(cyanovaleric acid)  
**192386-18-8DP**, reaction products with azobis(cyanovaleric  
acid) 192386-21-3DP, reaction products with azobis(cyanovaleric  
acid) 192386-24-6DP, reaction products with azobis(cyanovaleric  
acid) 192386-27-9DP, reaction products with azobis(cyanovaleric  
acid) 192386-29-1DP, reaction products with thioglycolic acid  
192386-32-6DP, reaction products with mercapto compound  
192386-35-9DP, reaction products with mercapto compound  
192386-37-1DP, reaction products with mercapto compound  
192386-39-3DP, reaction products with mercapto compound  
192386-41-7DP, reaction products with mercapto compound  
192386-43-9DP, reaction products with mercapto compound  
192386-46-2DP, reaction products with mercapto compound  
192386-49-5P 192386-53-1DP, reaction products with acrylic graft  
copolymer

RL: PNU (Preparation, unclassified); TEM (Technical or engineered  
material use); **PREP (Preparation)**; USES (Uses)

(radiation-sensitive resist **composition** containing graft  
polymer and pigment for color filter)

L25 ANSWER 51 OF 54 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1996:615721 HCAPLUS

DOCUMENT NUMBER: 125:261259

TITLE: Radiation-sensitive resin compositions useful  
as negative-working resists

INVENTOR(S): Shimokawa, Tsutomu; Sugiura, Makoto; Endo,  
Masayuki; Betsusho, Nobuo

PATENT ASSIGNEE(S): Japan Synthetic Rubber Co Ltd, Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 11 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 08184966

A2

19960716

JP 1994-339137

1994

1228

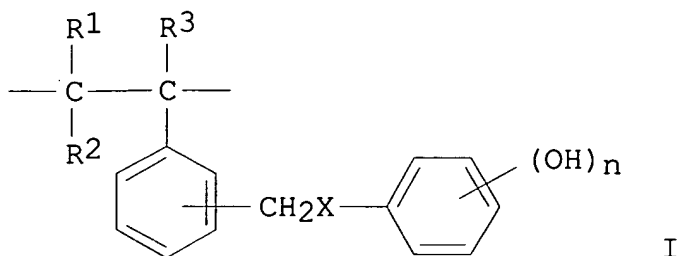
PRIORITY APPLN. INFO.:

JP 1994-339137

1994

1228

GI



AB The resin compns. contain (a) a polymer having a structural unit I [R1-3 = H, C1-6 alkyl; X = OCO, CO, NR4CO (R4 = H, C1-6 alkyl), SO2, OSO2; n = 1-5], (b) a compound that generates an acid by irradiation, (c) a compound that can crosslink the polymer by action of

the acid. The compns. useful as neg.-working resists are independent of the elapse of time after irradiation and post-baking temperature in changes in the line width of the resist patterns and show

high sensitivity, resolution, and developability. Thus, a resist comprised poly(4'-vinylbenzyl 4-hydroxybenzoate), Cymel 300 (crosslinking agent), and 2-(4-methoxy- $\beta$ -styryl)-bis(4,6-trichloromethyl)-sym.-triazine.

IT **58813-78-8P 182000-28-8P 182000-34-6P**  
**182000-37-9P 182213-92-9P**

RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)

(radiation-sensitive neg. working resist **composition** containing polystyrene derivative)

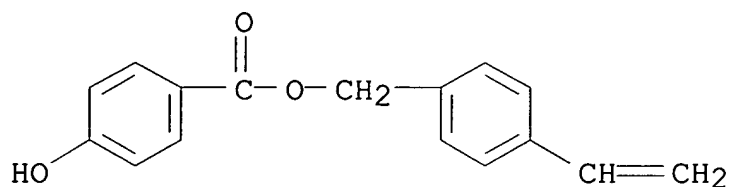
RN 58813-78-8 HCAPLUS

CN Benzoic acid, 4-hydroxy-, (4-ethenylphenyl)methyl ester, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 58813-77-7

CMF C16 H14 O3



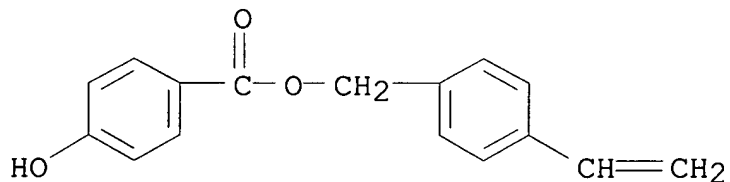
RN 182000-28-8 HCAPLUS

CN Benzoic acid, 4-hydroxy-, (4-ethenylphenyl)methyl ester, polymer with 2-methyl-2-propenoic acid (9CI) (CA INDEX NAME)

CM 1

CRN 58813-77-7

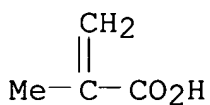
CMF C16 H14 O3



CM 2

CRN 79-41-4

CMF C4 H6 O2



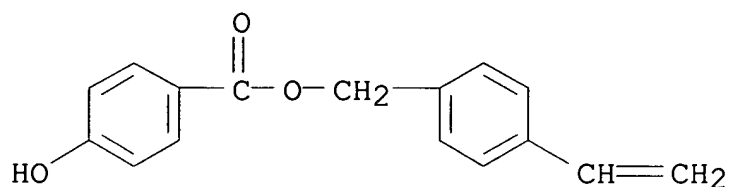
RN 182000-34-6 HCAPLUS

CN Benzoic acid, 4-hydroxy-, (4-ethenylphenyl)methyl ester, polymer with oxiranylmethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

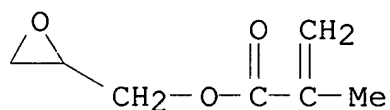


CRN 58813-77-7  
CMF C16 H14 O3



CM 2

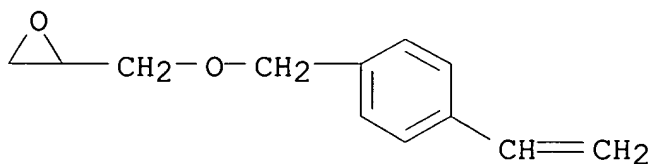
CRN 106-91-2  
CMF C7 H10 O3



RN 182000-37-9 HCAPLUS  
CN Benzoic acid, 4-hydroxy-, (4-ethenylphenyl)methyl ester, polymer with [[(4-ethenylphenyl)methoxy]methyl]oxirane (9CI) (CA INDEX NAME)

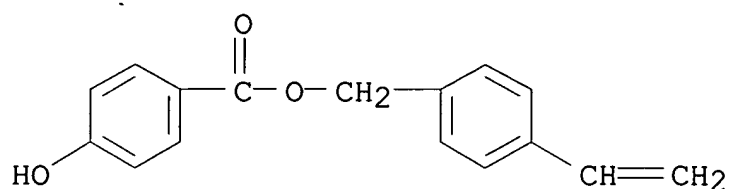
CM 1

CRN 113538-80-0  
CMF C12 H14 O2



CM 2

CRN 58813-77-7  
CMF C16 H14 O3



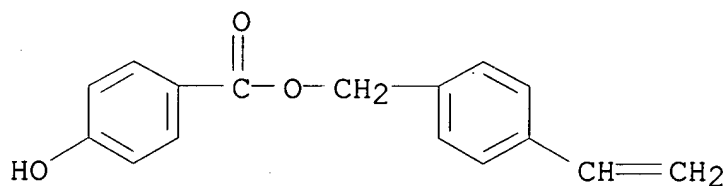
RN 182213-92-9 HCAPLUS

CN Butanedioic acid, methylene-, monomethyl ester, polymer with  
(4-ethenylphenyl)methyl 4-hydroxybenzoate (9CI) (CA INDEX NAME)

CM 1

CRN 58813-77-7

CMF C16 H14 O3



CM 2

CRN 26248-95-3

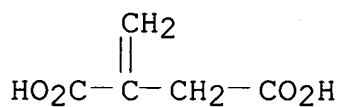
CMF C6 H8 O4

CCI IDS

CM 3

CRN 97-65-4

CMF C5 H6 O4



CM 4

CRN 67-56-1  
CMF C H4 O

H<sub>3</sub>C-OH

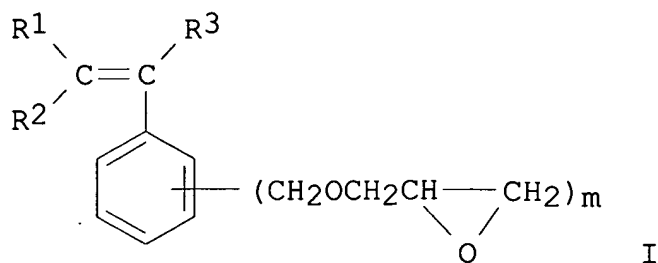
IC ICM G03F007-038  
ICS G03F007-004; H01L021-027  
CC 74-5 (Radiation Chemistry, Photochemistry, and  
**Photographic** and Other Reprographic Processes)  
Section cross-reference(s): 37  
IT **58813-78-8P 182000-28-8P 182000-34-6P**  
**182000-37-9P 182213-92-9P**  
RL: PNU (Preparation, unclassified); TEM (Technical or engineered  
material use); **PREP (Preparation)**; USES (Uses)  
(radiation-sensitive neg. working resist **composition**  
containing polystyrene derivative)

L25 ANSWER 52 OF 54 HCAPLUS COPYRIGHT 2005 ACS on STN  
ACCESSION NUMBER: 1995:1006797 HCAPLUS  
DOCUMENT NUMBER: 124:189522  
TITLE: Radiation-sensitive resin compositions useful  
as positive-working resists  
INVENTOR(S): Shimokawa, Tsutomu; Endo, Masayuki; Betsusho,  
Nobuo  
PATENT ASSIGNEE(S): Japan Synthetic Rubber Co Ltd, Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 11 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO. -----	KIND ----	DATE -----	APPLICATION NO. -----	DATE
JP 07248629	A2	19950926	JP 1994-39925	1994 0310
JP 3003064	B2	20000124	JP 1994-39925	1994 0310

PRIORITY APPLN. INFO.:

GI



AB The title resin compns. comprise (1) a copolymer of unsatd. carboxylic acids, radically polymerizing epoxy-containing compds. I (R1-3 =

H, C1-10 alkyl; m = 1-5), and optional other radically copolymerizing compds. and (2) a 1,2-quinonediazide compound. The compns. show high sensitivity and developability and provide pos. resist patterns with good resistance to heat and chems. and adhesion to substrate and high transparency. Thus, a resist comprised methacrylic acid-p-vinylbenzyl glycidyl ether copolymer and 1,2-quinonediazido-5-sulfonate of 4,4'-[1-[4-[1-(4-hydroxyphenyl)-1-methylethyl]phenyl]ethylidene]bisphenol.

IT **173027-31-1P 173027-32-2P 173027-33-3P**

**173436-29-8P 173436-30-1P**

RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)

(resist **composition** containing quinonediazide compound and epoxy resin with carboxyl group)

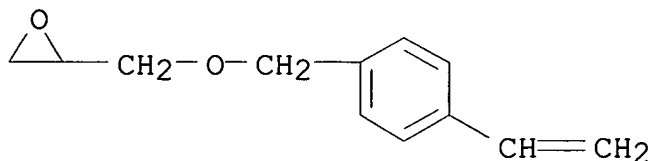
RN 173027-31-1 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, polymer with [[(4-ethenylphenyl)methoxy]methyl]oxirane (9CI) (CA INDEX NAME)

CM 1

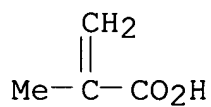
CRN 113538-80-0

CMF C12 H14 O2



CM 2

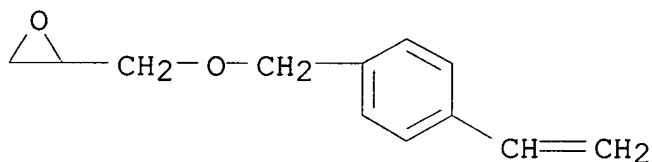
CRN 79-41-4  
CMF C4 H6 O2



RN 173027-32-2 HCAPLUS  
CN 2-Propenoic acid, 2-methyl-, polymer with [[(4-ethenylphenyl)methoxy]methyl]oxirane and oxiranylmethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

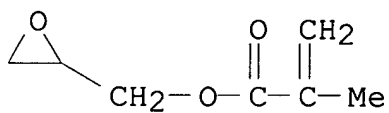
CM 1

CRN 113538-80-0  
CMF C12 H14 O2



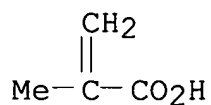
CM 2

CRN 106-91-2  
CMF C7 H10 O3



CM 3

CRN 79-41-4  
CMF C4 H6 O2



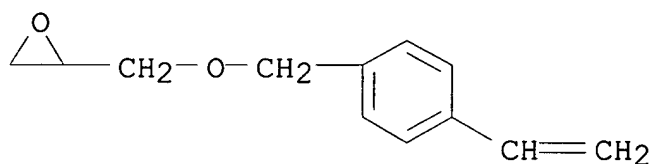
RN 173027-33-3 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, polymer with ethenylbenzene,  
[[ (4-ethenylphenyl)methoxy]methyl]oxirane and oxiranylmethyl  
2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 113538-80-0

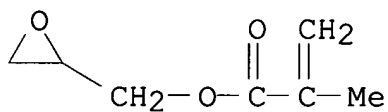
CMF C12 H14 O2



CM 2

CRN 106-91-2

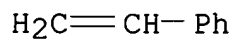
CMF C7 H10 O3



CM 3

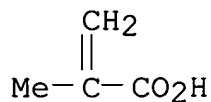
CRN 100-42-5

CMF C8 H8



CM 4

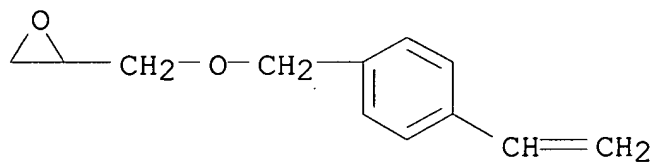
CRN 79-41-4  
CMF C4 H6 O2



RN 173436-29-8 HCAPLUS  
CN Butanedioic acid, methylene-, 4-methyl ester, polymer with  
[[ (4-ethenylphenyl)methoxy]methyl]oxirane (9CI) (CA INDEX NAME)

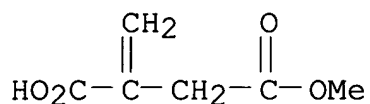
CM 1

CRN 113538-80-0  
CMF C12 H14 O2



CM 2

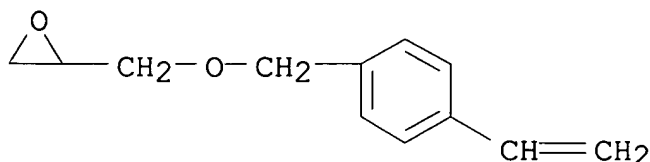
CRN 7338-27-4  
CMF C6 H8 O4



RN 173436-30-1 HCAPLUS  
CN Butanedioic acid, methylene-, 4-butyl ester, polymer with  
[[ (4-ethenylphenyl)methoxy]methyl]oxirane (9CI) (CA INDEX NAME)

CM 1

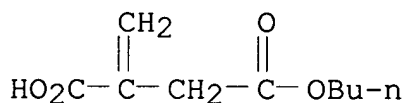
CRN 113538-80-0  
CMF C12 H14 O2



CM 2

CRN 6439-57-2

CMF C9 H14 O4



IC ICM G03F007-039

ICS G03F007-022; G03F007-027; G03F007-033; H01L021-027

CC 74-5 (Radiation Chemistry, Photochemistry, and  
**Photographic** and Other Reprographic Processes)  
 Section cross-reference(s): 76

IT **173027-31-1P 173027-32-2P 173027-33-3P**  
**173436-29-8P 173436-30-1P**

RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)  
 (resist **composition** containing quinonediazide compound and epoxy resin with carboxyl group)

L25 ANSWER 53 OF 54 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1995:503233 HCAPLUS

DOCUMENT NUMBER: 122:252104

TITLE: Process for generation of acid for imaging,  
 and imaging media for use in this process

INVENTOR(S): Grasshoff, Jurgen M.; Marshall, John L.;  
 Minns, Richard A.; Mischke, Mark R.; Puttick,  
 Anthony J.; Taylor, Lloyd D.; Telfer, Stephen  
 J.

PATENT ASSIGNEE(S): Polaroid Corp., USA

SOURCE: U.S., 20 pp. Cont.-in-part of U.S. 5,334,489.  
 CODEN: USXXAM

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:



PATENT NO. -----	KIND ----	DATE -----	APPLICATION NO. -----	DATE
US 5395736	A	19950307	US 1993-141860	1993 1022
US 5334489	A	19940802	US 1992-965162	1992 1023
CA 2147633	AA	19940511	CA 1993-2147633	1993 1022
US 5445917	A	19950829	US 1994-319925	1994 1007
US 5534388	A	19960709	US 1995-407576	1995 0320
PRIORITY APPLN. INFO.:			US 1992-965162	A2 1992 1023
			US 1993-141860	A3 1993 1022
			US 1994-319925	A3 1994 1007

OTHER SOURCE(S): MARPAT 122:252104

AB Acid can be generated by exposing a superacid precursor to actinic radiation effective to generate superacid from the superacid precursor and heating the superacid in admixt. with a secondary acid generator capable of undergoing thermal decomposition to produce

a secondary acid. The superacid catalyzes decomposition of the secondary

acid generator, thus increasing the quantity of strong acid present in the medium. The resultant secondary acid can be used to effect a color change in an acid-sensitive material, so providing an imaging process.

IT **155198-36-0P**

RL: MOA (Modifier or additive use); SPN (Synthetic preparation);

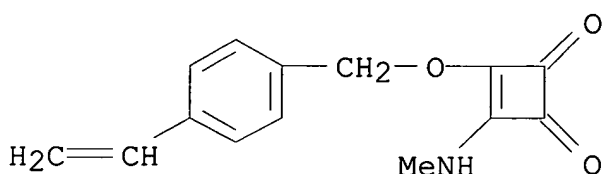
**PREP (Preparation); USES (Uses)**

(generation of photoacid from super-acid for photoimaging composition)

RN 155198-36-0 HCAPLUS  
 CN 2-Propenoic acid, 2-methyl-, dodecyl ester, polymer with  
 3-[(4-ethenylphenyl)methoxy]-4-(methylamino)-3-cyclobutene-1,2-  
 dione (9CI) (CA INDEX NAME)

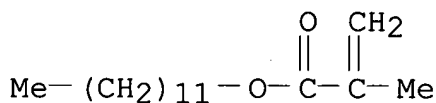
CM 1

CRN 155198-35-9  
 CMF C14 H13 N O3



CM 2

CRN 142-90-5  
 CMF C16 H30 O2

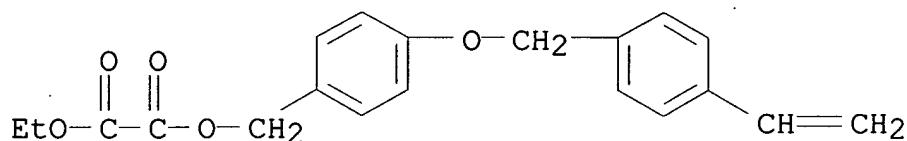


IT **159256-40-3P**, Poly(ethyl 4-(4-vinylbenzyloxy)benzyl  
 oxalate)  
 RL: MOA (Modifier or additive use); SPN (Synthetic preparation);  
**PREP (Preparation)**; USES (Uses)  
 (secondary acid generator; generation of photoacid from  
 super-acid for photoimaging **composition**)

RN 159256-40-3 HCAPLUS  
 CN Ethanedioic acid, [4-[(4-ethenylphenyl)methoxy]phenyl]methyl ethyl  
 ester, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 159256-39-0  
 CMF C20 H20 O5

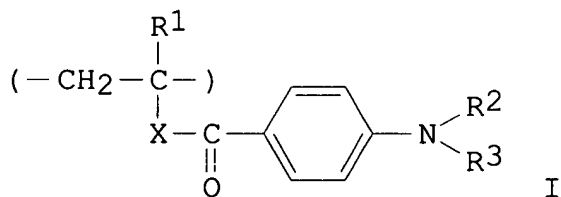


- IC ICM G03C001-494  
ICS G03C001-492; G03C001-76
- NCL 430270000
- CC 74-4 (Radiation Chemistry, Photochemistry, and  
**Photographic** and Other Reprographic Processes)  
Section cross-reference(s): 25
- IT 70278-60-3P, 3,4-Bis(cyclohexyloxy)-cyclobut-3-ene-1,2-dione  
155198-29-1P, Bis(3-bromo-2,3-dimethylbut-2-yl) squarate  
155198-30-4P, 3-t-Butoxy-4-phenylcyclobut-3-ene-1,2-dione  
155198-31-5P, 3,4-Bis(. $\alpha$ -methylbenzyloxy)-cyclobut-3-ene-  
1,2-dione 155198-33-7P, 3-Amino-4-(t-butoxy)-cyclobut-3-ene-1,2-  
dione 155198-34-8P, 4-Hexyl-3-(p-vinylbenzyloxy)-cyclobut-3-ene-  
1,2-dione 155198-35-9P, 3-Methylamino-4-(p-vinylbenzyloxy)-  
cyclobut-3-ene-1,2-dione **155198-36-0P** 155198-37-1P  
155198-38-2P 156379-22-5P, 3,4-Bis(p-methylbenzyloxy)-cyclobut-3-  
ene-1,2-dione  
RL: MOA (Modifier or additive use); SPN (Synthetic preparation);  
**PREP (Preparation)**; USES (Uses)  
(generation of photoacid from super-acid for photoimaging  
**composition**)
- IT 814-43-7P, Bis(2-methyl-2-hexyl) oxalate 18241-31-1P,  
Bis(p-methylbenzyl) oxalate 24523-30-6P, Bis( $\alpha$ -  
methylbenzyl) oxalate 31164-25-7P, Bis( $\alpha$ , $\alpha$ -  
dimethylbenzyl) oxalate 113282-95-4P, 2-Methacryloxyethyl oxalyl  
chloride 159256-23-2P, Bis(p-butoxybenzyl) oxalate  
159256-24-3P, Bis(p-methoxy- $\alpha$ -methylbenzyl) oxalate  
159256-25-4P, Ethyl p-methoxybenzyl oxalate 159256-26-5P  
159256-27-6P 159256-28-7P 159256-30-1P 159256-31-2P  
159256-35-6P, Poly(2-methacryloxyethyl p-methoxybenzyl oxalate)  
159256-36-7P, 4-Methacryloxybutyl p-methoxybenzyl oxalate  
159256-37-8P, Poly(4-methacryloxybutyl p-methoxybenzyl oxalate)  
159256-38-9P, 4-Benzyloxybenzyl 2-methacryloxyethyl oxalate  
159256-39-0P, Ethyl 4-(4-vinylbenzyloxy)benzyl oxalate  
**159256-40-3P**, Poly(ethyl 4-(4-vinylbenzyloxy)benzyl  
oxalate) 159256-41-4P, 4-(4-Vinylbenzyloxy)benzyl oxalate)  
162491-38-5P  
RL: MOA (Modifier or additive use); SPN (Synthetic preparation);  
**PREP (Preparation)**; USES (Uses)  
(secondary acid generator; generation of photoacid from  
super-acid for photoimaging **composition**)

L25 ANSWER 54 OF 54 HCAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 1994:334931 HCAPLUS  
 DOCUMENT NUMBER: 120:334931  
 TITLE: Photopolymerizable resin composition  
 containing  $\alpha$ -diketone  
 INVENTOR(S): Inomata, Kyoshi; Yamada, Satoshi; Matsumoto,  
 Takeo  
 PATENT ASSIGNEE(S): Nippon Oils & Fats Co Ltd, Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 15 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO. -----	KIND ----	DATE -----	APPLICATION NO. -----	DATE
JP 05127379	A2	19930525	JP 1991-313033	1991 1102
PRIORITY APPLN. INFO.:				JP 1991-313033 1991 1102

GI



AB The title composition contains a vinyl polymer containing constituent units

I [R<sup>1</sup> = H, Me; R<sup>2-3</sup> = H, alkyl, Ph; X = O, phenylene, CO<sub>2</sub>-R<sup>4</sup>-O, CO<sub>2</sub>-(CH<sub>2</sub>-CR<sup>5</sup>H-O-)<sub>n</sub>, C(:O)(CH<sub>2</sub>)<sub>n</sub>C(OH)CH<sub>2</sub>O, C<sub>6</sub>H<sub>4</sub>(CH<sub>2</sub>)<sub>m</sub>O; R<sup>4</sup> = C<sub>1</sub>-6 alkylene or alkylidene; R<sup>5</sup> = H, Me; n = 1-6; m = 0-7] and an  $\alpha$ -diketone Y-C(:O)-C(:O)-Z [Y, Z = (sub)hydrocarbon group, Y and Z may be bonded to form condensed aromatic ring]. The composition is highly sensitive to light, including visible light, of wavelength 300-600 nm and polymerizes to form a hardened material which is superior in surface hardening property and light transmittance.

IT 155425-48-2P

RL: PREP (Preparation)

(preparation of, for photopolymerizable resin composition)

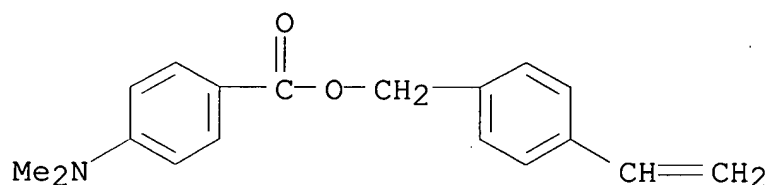
RN 155425-48-2 HCAPLUS

CN Benzoic acid, 4-(dimethylamino)-, (4-ethenylphenyl)methyl ester, polymer with methyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 139565-81-4

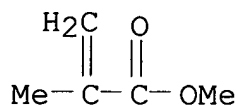
CMF C18 H19 N O2



CM 2

CRN 80-62-6

CMF C5 H8 O2



IC ICM G03F007-028

ICS G03F007-027; G03F007-033; H01L021-027; H05K003-06

CC 74-4 (Radiation Chemistry, Photochemistry, and

**Photographic** and Other Reprographic Processes)

IT 79984-80-8P, p-(N,N-Dimethylamino)benzoyloxyethyl methacrylate

105058-53-5P, p-(N,N-Dimethylamino)benzoyloxyethyl

methacrylate-methyl methacrylate copolymer 106008-75-7P

112925-61-8P 139565-81-4P 142743-69-9P, p-(N,N-

Dimethylamino)benzoyloxyethyl methacrylate homopolymer

**155425-48-2P** 155425-49-3P 155425-50-6P 155425-52-8P

155425-54-0P 155425-56-2P 155425-57-3P 155425-58-4P

RL: PREP (Preparation)

(preparation of, for photopolymerizable resin composition)